

THE AMERICAN AGRICULTURIST.



Agriculture is the most healthful, the most useful, and the most noble employment of Man.--Washington.

Vol. I.

New-York, September, 1842.

No. 6.

A. B. ALLEN, and R. L. ALLEN, Editors.

SAXTON & MILES, Publishers, 205 Broadway.

"THE AMERICAN AGRICULTURIST"

will be published Monthly, each number to contain thirty two pages royal octavo.

Terms.--One Dollar per annum, payable strictly in advance.

Six Copies will be sent for \$5, if remitted at one time, free of postage, in funds current in New-York, or in the States where the Subscribers reside.

Twenty five Copies will be sent for \$20, if remitted as above.

Editors of Newspapers noticing this Work, will be furnished a copy gratis, on sending such notice to this Office.

Communications should be addressed to the Editors or Publisher, post paid, No. 205 Broadway, New-York.

Postmasters are permitted by Law to enclose money for Subscriptions, free of postage.

Each number of the Agriculturist contains but one sheet, and will therefore be subject to newspaper postage only, which is one cent in the State, or within 100 miles of its publication, and one and a half cents if over 100 miles without the State.

Advertisements will be inserted at \$1, if not exceeding twelve lines, and in the same proportion if exceeding that number.

History and Traditions of Short Horn Cattle.

The great show at Hull being over, we accepted the kind invitation of our excellent friend Mr. Bates, to pass a week with him at Kirkleavington; and, on our way thither, made occasional detours in Yorkshire and Durham, stopping to visit the Roman antiquities at York, its old churches, and the glorious minster; Studley Park, with its charming show grounds of lake and dell, and extensive monastic ruins, the solemn grandeur and exquisite beauty of which neither pen or pencil can describe; Ripon Cathedral and Newby Hall, and several other places; and subsequently by ourselves, the large manufacturing cities of Leeds and Sheffield, and numerous towns and scenes that it would but fatigue our readers to mention. We traversed Durham and Yorkshire with unspeakable interest, for these counties are emphatically the home of the Short Horns. Here they originated, here they have flour-

ished from time almost immemorial, and here they received those improvements that have carried them forward to such a pitch of excellence as to ensure them a precedence throughout the most fertile regions of the world. Very large exportations have been going on from here to America for more than a quarter of a century. The British colonies in Australia and elsewhere for some time have been following our example, and a few of the European governments are just becoming alive to their marked superiority for milk and grazing in rich pastures, over every other breed of neat stock existing.

Ten years ago we read the Rev. Mr. Berry's pamphlet of the history of Short Horns with eager interest, but have ever regretted that it was not written out more fully and complete, for at this time the Messrs. Colling were living, and many others, who unhappily are now dead, that could have furnished particulars of the appearance, characteristics and breeding of the founders of the Herd Book, and their remote ancestors, which would have been of the greatest importance not only to the breeders of our day, but even to their posterity. How eagerly is every minute particular gathered up and detailed, again and again, of the appearance, the powers, the speed, the endurance, and general traits of England's early Arabians and their immediate blood descendants, and will less interest hereafter be attached to Short Horns? We think not, and as a few are yet living who have seen and known the first animals of the Herd Book, we hope that

among them some one will yet be induced to give the world, fearlessly and honestly, every thing that can now be gathered up respecting their origin, gradual improvement, and, indeed, their whole minute history. Mr. Berry, alludes to "floating traditions," and although there was much, doubtless, somewhat apocryphal in them, still they contained grains of truth, which might have been sifted out; and even if this were impossible, we must confess ourselves so enthusiastic in the cause, that we should have copied them down verbatim, allowing the public to estimate them at their own value. We acknowledge that we have a profound respect for this same "tradition;" gleams of light can always be found in its records, and what else is the early profane history of man, and every thing connected with him?

The popular belief about Short Horns is, that they were all a large, coarse, though somewhat valuable race of animals, existing on the banks of the Tees, till Messrs. Robert and Charles Colling, of Durham, appeared upon the stage as breeders, and that we are indebted to these gentlemen for their chief excellence and improvement; nay, that such was their genius and such their plastic power over the animal creation, that they took up the most common and ordinary animals of the country, and with a sort of enchanter's wand, converted them, in the space of a few years, into the superb, improved Short Horns that now prevail in Great Britain and America. But *tradition* says, the best tribes have existed in great excellence for more than two centuries, making them in reality an ancient race of animals, carrying the same pre-eminent qualities from generation to generation, with continued improvements on the part of their indefatigable and scientific breeders, till at length they have reached a state of excellence which may be pronounced almost perfection.

As an evidence of the ancient excellence of this race, let us now turn to the pamphlet of Mr. Berry, who seems to have received and set down most of his particulars with great caution.

As early as 1745, living witnesses informed him that a breed of cattle existed on the banks of the Tees, in color resembling what is called the improved breed of the present day, except that the fashionable roan was not quite so prevalent; possessing a fine mellow touch, good hair, light offal, particularly wide carcasses, and deep fore quarters; they were also justly celebrated for extraordinary proof when slaughtered, resembling

thus closely their descendants of the present day. One trifling difference alone is worth recording, the horns of the old Teeswater breed were rather longer, and turned gaily upwards. About this time Sir William St. Quintin, of Scampston, imported cows and bulls from Holland, which were soon crossed upon the Teeswater stock, and became distinguished, as "uniting in a wonderful degree, good grazing and dairy qualities."

In 1740, Mr. Milbank, of Barringham, stood pre-eminent as a Short Horn breeder; and it is on record, that a five year old ox of his weighed, dressed the four quarters, 2,100 lbs. beside 224 lbs. of rough tallow; and a cow of the same stock, a daughter of the old Studley bull, weighed upwards of 1,540 lbs. The Studley bull was described to Mr. Berry, by a person who had often seen him, as possessing "wonderful girth and depth of fore-quarters, very short legs, a neat frame, and light offal." Had he added mellow handling, which no doubt the animal possessed, nothing more essential could be said of the good Short Horns of the present day, and yet this bull existed long before the Messrs. Colling appeared as breeders, for he was the sire of Dalton Duke, sold at the "then high price of 50 guineas to Messrs. Maynerd and Wetherell, in whose possession he served cows at half a guinea each." From the old Studley bull are also descended William and Richard Barker's and Mr. Hill's bulls, all animals of the highest reputation of their day, and the originals of the improved Short Horns. These circumstances forcibly prove that Mr. Milbank must have possessed a very valuable stock of cattle, even at that early period, namely, one century since.

From Sir William St. Quintin, Sir James Pennyman stocked his estates in the counties of Yorkshire, Durham, and Northumberland, and from these came the celebrated Snowden bull, bred by one of his tenants at Hurworth, which was the sire of Hubback.

As a proof of what the Short Horns did before, and about the time, the Messrs. Colling commenced their career of breeding, Mr. Berry records the following facts of their great weight and early maturity.

Sir Henry Grey, of Howick, bred two oxen, which weighed, at six years old, 1820 lbs. each.

Miss Allen, of Grange, bred a three year old heifer, fed on hay and grass alone, which weighed 1260 lbs. The same lady also bred two three year old steers, fed in a similar manner, weighing respectively 1288 and 1344 lbs.

Mr. Waistell's four year old steer weighed

1510 lbs. Another of same age, bred by Mr. Simpson, fed on hay and turnips alone, weighed 1890 lbs.

A cow, from Mr. Hill's stock, weighed 1778 lbs. A Northumberland ox, bought by Mr. Waistell, yielded 364 lbs. of tallow.

Mr. Coates slaughtered a heifer, fed on turnips and hay, which, at two years and two months old, weighed 952 lbs., while a seven months heifer of his came up to 476 lbs., and a steer, exactly three years old, 1330 lbs., and another, two months older, 1470 lbs.

An ox, bred by Mr. Hill, six years old weighed 2124 lbs.

Two Howick oxen, at seven years old, respectively, 2137 lbs., and 2136 lbs. of beef, with 231 and 224 lbs. tallow.

Mr. Charge's ox, of same age, 2362 lbs., with 192 lbs. of tallow.

"Thus much," adds Berry, "for the Teeswater cattle, the originals of the improved Short Horns, ripe in points, possessing fine symmetry, and light offal, their descendants are not a breed of yesterday, liable and likely to *degenerate tomorrow*; but they possess the important advantage of being descended from a long line of animals, in which existed, in an eminent degree, the good points which are now admired in themselves."

In passing over the classic ground of this famous breed of cattle with Mr. Bates, our interest and enthusiasm in their early history, seemed to awaken something of the same feeling in their veteran breeder, our excellent friend and fellow-traveller. His own superb tribe, descended, as he claims, from the most ancient of the ancients, had just carried off pretty much all the prizes of value at the Royal Agricultural show at Liverpool, and again at that of Yorkshire, at Hull, where, at a public dinner, he was toasted by an honorable member of parliament, as the "unconquerable Bates." With all these blushing honors thick upon him, he was, of course, in excellent spirits, and, as we stopped at towns and rambled over beautiful estates, many were the curious details that he gave us respecting them, but a small part of which only, we regret to say, we have now the space to relate. His father was a breeder of some eminence before him, and he himself was the contemporary of the Messrs. Colling, occasionally domiciled at their hospitable mansion, watching and commenting on their breeding, and now and then purchasing an animal for himself as he could obtain them, and they suited his purpose.

The family of the Aislabies, the then resi-

dents of Studley Park, had very fine cattle in the seventeenth century. Sir William St. Quintin drew some of his best blood from this source, and of course Hubback had it in his veins through the Snowden bull. The ancestors of the present Sir Edward Blackett, of Matfer, in Northumberland, then owners of Newby Hall, (now the residence of Earl de Gray, Lord Lieutenant of Ireland,) paid great attention to short horned cattle at the same time with the Aislabies. Portraits of these animals were occasionally taken and hung up to adorn the entrance of Norfolk Hall; but, when the noble residence passed out of their hands, those pictures were sold. We should hope that they existed yet in some "old curiosity shop," and, if so, and can be found, we shall then have a definite idea of what one family of ancient Short Horns were.

But Mr. Bates' proudest claim of antiquity rests upon the Duchess tribe, and these, he contends were good animals, bred by the Smithsons of Stanwix, (now Duke of Northumberland), two centuries ago.*

The last Cow of the superior race of Short Horns, being on its way to London, to be sold in 1784, Mr. C. Colling heard of it and purchased her. This was the same year he bought Hubback; to him she was bred. Her produce was put to Favorite, (252), and that to the Dairy bull (186),† and thus the blood was preserved, and by Mr. Bates' purchases in 1804 and 1810 of Mr. Colling, has ever

* About the time that George III. ascended the throne, the title of Duke of Northumberland became extinct by the death of the last male heir of the Percy family. Sir Hugh Smithson had married a daughter of the Duke of Somerset, descended from the Percy family by her mother, and having children by her, George III. raised him to the title of Duke of Northumberland. So fond was he of his Short Horns, that his peers quizzingly dubbed him "the Yorkshire grazier." He was in the habit of weighing his cattle, and the food they eat, so as to ascertain the improvement they made for the food consumed. The Earl Percy, who fought at Bunker's Hill, was his son, and it was during his absence to America that the estate at Stanwix was grossly mismanaged, and its fine race of Short Horns all fattened for the butcher, or sold off. The Mr. Smithson, who left the large sum of half a million to the United States, as a fund for the promotion of national science, was a natural son of the late Duke of Northumberland. It has been suggested that the Smithsonian bequest be appropriated to the support of a model farm, and high school of agriculture; and, if this praiseworthy object could be carried into effect, it would be a curious coincidence, that a descendant of the greatest improver of Short Horns in Europe, shall be the founder of the greatest improvement of agriculture in America. But we doubt whether anything so good will ever become of the legacy. We fear our politicians will yet spend twice the amount of the bequest in wrangling over its disposition, and then, perhaps, place it in a very different manner than was intended by the testator. Here is another regret, that the benevolent donor had not come over to America while living, and seen himself to the disposition of what he had to give. There would have been then an immediate application of it to some useful and benevolent purpose.

† See Coates' Herb Book, vol. 1st.

since rested in his possession. We saw the portrait of this Stanwix Cow's great granddaughter, the produce of the Dairy bull and dam of Ketton I. (709,)* and as the family now down to the 52d Duchess, bred by Mr. Bates, strongly resembles it in general characteristics, we give a description.—This was taken we believe in 1804 when the animal was rather low in flesh, and giving milk; at which time, being deep milking, they show thin upon the rump, but when dried off and fattened, Mr. B. assured us, they made as good a point there as elsewhere. Their colors vary, from deep rich red to a roan, and both horns generally turn slightly up. Color of the portrait more red than white, the former predominating over the neck and shoulder, the latter on the flank. Horns fine, short, and of a clear waxy color, one of them drooping a little, the other slightly turned up—head long and fine, the muzzle extremely so—eyes bright and glowing, and standing well out. Brisket wide, deep and better forward than any other animal known, we do not even except the living Dutchess 34, though a superb model in this respect. Shoulder, barrel and loin good, and rather thin on the rump, in consequence, as before remarked, of being in a milking state. The tail fine, but not quite as perfectly set on as we could have wished, but this is not a family fault in the descendants. Her limbs midling as to length, and clean and sinewy, and the whole animal, altogether, bearing a fine finished fashionable air.

The beef of this tribe is pronounced superior, and their handling very mellow and elastic. In this respect as well as all others they were favorites with Mr. Colling, and when his stock was in its highest perfection, he was in the habit of showing Dutchess I. as a model of superior handling, and has repeatedly said, he never bred so good an animal out of the Stanwix Cow he purchased of the agent of the Duke of Northumberland, as she herself was, though put to his best bulls, Hubback, Favorite, and Daisy.

It was conceded by a company of old breeders in 1812, in discussing the question of the improvement of Short Horns, that no stock of Mr. Colling's breeding ever equalled "Lady Maynard," the dam of Phoenix, and grandam of Favorite. One cannot deny that the Messrs. Colling deserve great credit as breeders, and were no doubt improvers to a considerable extent; but if the above statements be true, they are far, very far indeed,

from being the *creators* and *originators* of the best tribes of Short Horns. They strike us as having been sharp shrewd men, and were fortunate in securing the best animals of their day, and these, so long as they continued breeders, they kept exclusively to themselves. We saw a letter of Mr. C. Colling, when in England, written in a handsome round hand, declining to give the pedigree of an animal asked of him, and stating that it was a general rule with him, from which, if our memory serves us right, he added, he had never departed, and his movements (as indeed are most of those of the breeders in England even at the present day,) were shrouded in as much mystery as it was possible to assume.* If they see an advantage in their stock, they at once determine to keep it as exclusively as they can, and make the most possible out of it. Perhaps as they cannot get a patent right for animals, this is all fair enough as the world goes, and for one we do not complain, since they left the *results* for the world.

Great antiquity is claimed for some of the stock in Northumberland, and as early as 1770, a Mr. Dickson, and probably some others had cattle that were famous milkers, and much resembled in other particulars the Short Horns of the present day, being quick feeders and good handlers. We might enlarge upon this subject, but perhaps have already said too much, and therefore forbear. Enough is on record to prove what we at first set out to do, namely, that the Short Horns are of an ancient and superior race; and it is undeniable throughout Great Britain, that when the good milking and quick feeding qualities of any breed of cattle are sought to be improved, the Short Horns are universally resorted to, and when properly selected, always with marked success. We saw these crosses in infinite number on the cattle of Ireland, Scotland, England and Jersey; and the colors and form of the Short Horns immediately stamped themselves upon the produce and predominated, which is proof indisputable, if other were wanting, of their great antiquity and long high breeding.

The dam of Hubback was supposed to be a well bred Short Horn, with at least some portion, if not all of the imported Holland blood†

* This was also eminently the case with the celebrated Bakewell.

† We have heard it asserted, that this stock was originally sent from England to Holland about two centuries since, as a present, by Charles I. to William, Prince of Orange, then Stadtholder, at the time of his marriage with the daughter of Charles, the Princess Henrietta Maria. From this produce a century after, Sir William

* See Coates' Herd Book, vol. 1st.

her veins. Her size was barely medium for a Short Horn, with a carcase near the ground, and very fine in all her points. She was a quick feeder, and would keep in good condition though running on the poor, short pasture of the common highway, and giving milk at the time. According to Mr. Berry's account, when put upon good pasture near Darlington, she soon became too fat to breed, and was consequently sent to the butcher. She was originally owned by Mr. Hunter near Hunworth, and there bred to Mr. Snowden's bull, of Sir James Pennymann's stock, and that produce was Hubback. When a calf, he and his mother were both sold in the Darlington market. The purchaser retained the cow, but re-sold the calf to a blacksmith, who gave it to his daughter after her marriage, and it was brought up in the lanes at Hornby, within five miles of Kirkleavington. In 1783 it became the property of Mr. R. Colling, and his neighbor Mr. Waistell, but it was not till a year after this, that Hubback attracted Mr. C. Colling's particular attention. He had then just returned from spending a week with the celebrated Mr. Bakewell, at Dishley, who at that period, was in the zenith of his glory as a breeder, and doubtless gave Mr. Colling many a good lesson on Cattle, for upon getting back to Durham, he instantly saw how superior Hubback was to the much vaunted Long Horns of Leicestershire, and was at once aroused to his great merits, and immediately very adroitly bought him for £8. 8. of his brother and Mr. Waistell, and would never after permit him to breed to any but his own herd. Hubback was a remarkable quick feeder, with clear waxy horns, mild, bright eyes, and a very pleasing countenance. His handling was superior to any bull of his day; his coat was of soft downy hair, and he had the habit of retaining it long in the spring before shedding. He had the same propensity to take on flesh as his dam, and with Mr. C. Colling's good keep, soon became useless as a breeder.

Bolingbroke (86), son of the celebrated bull Favorite (252), took on flesh rapidly, and in other respects was much like Hubback.

Favorite, his son, was a large massy ani-

mal, partaking more of the character of his dam Phœnix, than that of his sire. He possessed remarkable good loins, and long level hind quarters; his shoulder points stood wide, and were somewhat coarse, and too forward in the neck; his horns also, in comparison with Hubback's, were long and strong. These qualities were derived from Mr. Hill's stock of Blackwell, to which, though several crosses off, he seemed to breed directly back in all his general characteristics. He was a powerful animal, and of great constitution. As a proof of this last quality, Mr. Colling used to show with great pride a fine large heifer from him, of direct in and in breeding, of sire to daughter, grand-daughter, and so on to her, of the sixth generation. His bull calves were generally like himself, a trifle coarse, but of good constitution.

Comet was the most celebrated of his get, and sold for 1000 guineas. It was the stock of these two last bulls that brought the Short Horns into so great repute.

Phœnix, the dam of Favorite, was a large open boned cow, with more horn, and altogether coarser than her dam the beautiful Lady Maynard. Both Phœnix and Old Johanna had the fat lumps on the points of their buttocks, that formerly for a time carried off all the prizes at the Yorkshire Cattle Shows. But these critical remarks we fear are exhausting the patience of our readers.

To say that we admired Mr. Bates' stock, is only reiterating the opinion of many of the best judges in England. It particularly excels in handling* and feeding qualities, and he informed us that in milking they were quite equal. He has hitherto been more successful than any other breeder, in obtaining prizes at the Royal Agricultural Shows, and whether he continues so hereafter, remains to be seen. It is both troublesome and expensive showing stock, and perhaps satisfied with the honors already obtained, he may now retire from further competition.

THE FARM OF MR. BATES—CLAY LANDS.—His farm is about one thousand acres, of a stiff clay to the very top, reminding us strongly, in its whole composition, of the adhesive soil of a considerable portion of western New-York, and especially on the banks of the Niagara river.

In the moist climate of England it is very productive, especially in the grasses. But it takes a century for a meadow on such land to perfect itself, and we were absolutely as-

* See the term *handling* defined in this No. of our paper.

tonished to see the difference in grass produce from those that had been recently laid down, and such as had stood even forty years, compared with the oldest of one hundred years. The grass was so thick on this last, that it reminded us more of the fine close fur upon a beaver skin than anything in the way of herbage, to which we can compare it, and perfectly satisfied us of the conclusion, to which we had arrived from experiments at home, *that a stiff clay soil should never be disturbed by a plow, but left permanently in grass forever.* Mr. Bates has 612 acres of his farm under plow cultivation, which is divided into 12 fields of 51 acres each; these undergo a 12 years' rotation. Unless the season is particularly favorable and wet even for England, his soil is so heavy he cannot even succeed in raising turnips, and of course this crop often fails. Nevertheless, as this root is so important an aid in the support of stock, he annually makes a trial to grow it. We recommend his abandoning turnips and sowing sugar beet in their place, as infinitely better cattle feed, a more productive, and a perfectly certain crop on clay lands.* It is not material to the American farmer that we detail this system minutely, as it could not be exactly followed in our climate. The 12 years' course is subdivided in two sixes, and consists in a fallow of turnips, followed by wheat, then sowed to clover and grass for a sheep pasture, usually followed by a turnip fallow again, with wheat or oats, and lastly beans. He, in common with all English farmers, seeds much more heavily than Americans generally; we wish we could arouse our countrymen to the importance of following so commendable an example. For instance, Mr. Bates will sow on a single acre 5 lbs. of cow grass, (a kind of perennial clover), 5 lbs. white clover, 2 lbs. hop clover, $\frac{1}{4}$ bu. Italian rye grass, and $\frac{1}{4}$ do. Cocksfoot, (orchard grass), calculating at the same time, that the natural grasses, such as the *poa trivialis* and others, will come in plentifully of them-

* As to the good qualities of Sugar Beet in feeding, we refer to Earl Spencer's experiment of it, copied into May No. of this paper, page 53. Its superior value over Ruta-Baga and Mangel-Wurzel, we have ourselves often tested, and we have been unsuccessful in getting a crop of turnips, on heavy soils oftener than once in four years, though cultivated with great care, and that was during a very cold rainy season; whereas our Sugar Beet has uniformly been good, never less than 400 bushels per acre, and sometimes over eleven hundred; and we have a small crop now growing (Aug. 1842), that we think will turn out at least 1000 bushels to the acre. Indeed we shall be disappointed if it does not exceed this amount.

selves. Of course the land is all under-drained, either with tiles or the drain plow, this on all retentive soils is the *very first* and *most important* step to be taken in England, and on Mr. Bates' farm, was very soon followed, not only by a double product of grass, but by that of a greatly improved quality; and without underdraining, or open ditching, it would be almost impossible to obtain a good crop of grain, beans, or even roots.

We passed a whole week at the hospitable mansion of our kind and benevolent host, and a happy and we trust a profitable time we made of it. We should have entered into more details respecting the stock which we saw there, had not a slight allusion to it, in a hurried letter of ours published in last Nov. Cultivator, been totally misunderstood, and our motives for writing it most grossly and wantonly assailed. To any of these we have never thought it worth while to reply. Those who knew us understood our object in making the allusion, and to those who did not we conceived an explanation would be entirely useless. We can only hope hereafter that a better understanding will exist upon this subject, as well as some others to which very useless exceptions have been taken.

Improvement of Sandy Soils.

In a short jaunt we have recently taken through that paradise of New England, the Connecticut valley, we have witnessed a success in the reclaiming of worn out sandy lands, which we hardly dared to expect with the ease, economy and facility with which it has been accomplished. The Hon. W. Clark of Northampton, has been the great pioneer in this course, and from the successful results he has achieved we may fairly class him among the great agricultural reformers of the present day. He has already given to the public the theory of his operations, which we hope to find room to lay before our readers at some future time. Our object now is simply to give his *practise*, and after our farmers have begun the good work of reclaiming their almost barren wastes, it will be a pleasure for them to look into the *modus operandi*, and see the reason of their success. There are three essential features in this practise, and the simultaneous adoption of each is essential to effect the desired object. The first is the frequent and thorough use of the *roller*; the second a constant covering of crops on the ground; the third is the introduction of clover and grass as a fertilizer. To illustrate this, we give the history of a single field of

some 40 acres of worn out sandy soil, in the vicinity of N. This field was purchased by Mr. C. some eight or ten years since for nine dollars per acre, while the fertile bottom lands on the other side of the town, would sell readily for \$150 to \$200. His object was first to get a crop of corn if possible, and the land being too poor for this, he carried on to it a moderate quantity of peat or swamp muck, which was found in the low places on the same field. We may observe in passing, this peat and muck exists to an almost unlimited extent throughout New England, and we consider it of vastly more intrinsic value to the community than all the gold mines that have dazzled the eyes of our Southern neighbors for the last fifteen years. With this dressing say of fifteen to thirty loads to the acre, the whole cost of which consists in simply digging and throwing into heaps, to be drained, and acted on by the atmosphere, after which it is carried either by carts or sleds in winter on to the adjacent ground; the land is then ploughed, and whatever scurf, sand grass, rushes, mosses, pusseys and briars there may be on the land are turned under, and such is the *digestibility* of the soil all these raw materials are at once converted into humus or geine as food for the required plants. This sandy soil has the stomach of an ostrich, and if it cannot, as that voracious biped has the credit of doing, digest old shoes, iron spikes, and junk bottles, it can dissolve and convert into vegetable chyle, whatever organised matter is given to it. The effect of this comparatively slight dressing yielded a first crop of some thirty bushels of corn to the acre, enough to pay for the first cost of the land and the whole expense of producing it. But while the corn was growing, say from the 20th July to the 10th August, rye with red and white clover seed was sown, and the corn being so planted as to admit of harrowing two ways, or even four if necessary, it was well got in with the harrow, and the ground being amply protected by the corn during the sultry weather of this season, the new seed took a vigorous start, and as soon as the corn was somewhat matured, it was cut and carried off the ground, and the new growth then had the entire possession. The roller was then thoroughly applied, as also in the following spring. The early sowing gives strength to the roots of both rye and clover, and renders hazard of winter killing either, especially the clover, much less. When from any cause he is prevented from sowing the clover early, it is omitted till early in the following spring;

a postponement that should be avoided when possible, as it thus loses a year's time, requiring another season to mature. The rye is cut the following summer, when the clover is suffered to remain, shedding its seed upon the ground for a successive crop. The following season; if in proper condition, it is again put into corn or rye according to its fertility, and the course is again renewed. The land however usually requires an additional season in clover, and sometimes more to give, the requisite fertility. Mr. C. showed us a field, which from the originally poor condition described, without the addition of any manure or peat or muck, has produced him five crops in seven years, the last, which had but just taken off, yielding seventeen bushels to the acre. This it will be readily admitted is a large crop for poor land, and much beyond the average yield in New England. The growth of the clover on this field, of this spring's sowing, was promising in the highest degree, and as evenly set as in the best land, giving every promise of a large crop the next season, which of course is designed to be added to the soil for its future improvement. When the land is first put into use, (for Mr. C. has several other similar fields which have been variously treated, though always on the same principles,) and it is too poor to produce a paying crop of corn, and he has not time to add the muck, he turns under the surface vegetation, and puts on a crop of rye *always* accompanying this with the clover and after one year's crop from this last, he never fails in a fair yield of corn. On a field thus treated, without any dressing of muck he got 27 bushels of corn per acre for the first crop, and after an interval of another season, obtained thirty-three bushels on the same land, showing a decided increase in the productiveness of the soil. A slight dressing of plaster is generally, though not always used, and never exceeds half a bushel to the acre. Mr. C. admits that more plaster might be useful; we think one to two bushels per acre would be applied with decided advantage, but it is purchased at a high price, about \$10 per ton, and as economy and a self sustaining policy, has been a prominent principle in this system, this is all that has thus far been afforded. The muck would in all cases be a valuable, remunerating addition, but this he has not always the time to give, and at the prices he has paid for his land, he can afford to leave it once in two or three years in clover, by which it is renovated, and for the present perhaps this may be the most judicious plan. As lands become

dearer however, which they are rapidly doing under this management, they being now worth \$20 to \$30 per acre, of no better quality than such as he bought a few years since at \$8 to \$12, the policy of manuring will become more expedient, though the rapidly improving nature of this system will give greater efficacy to the clover crop as a fertilizer.

It is surprising to see the elevated noles and barren planes, that so lately exhibited nothing but a crawling sand, by the operations of the clover roots, in this otherwise impracticable material, gradually changing its inadhesive character to a firmly connected mass, showing a furrow slice that would gratify the most practised eye. Mr. Clark acknowledges his surprise at the facility with which the clover takes, and attributes it mainly to the use of the roller. We are inclined to concede much to that instrument, but think for his white and other clover he is greatly indebted to the Plaster. Of this we have more to say hereafter.

We observed the woodchucks, who are arrant epicures and gourmands in their selection of esculents, and especially of sweet and abundant clover fields, are thoroughly colonized over all the fields of Mr. C. They follow him, as our politicians do the successful candidate of Executive dispensations for John Randolph's seven principles, the five loaves and two fishes. They snuff his green patches of trefoils, and instantaneously abandon the poverty stricken fields of his unthrifty neighbors. His crop of wood chucks, though not as important as the *shoe crop* at Lynn may soon be well worth the harvesting.

Mr. C. has not pursued this cultivation sufficiently long to have matured a *system* of rotation, which, however, he virtually practises with some variations, from his own judgment. A little more experience will enable him to determine, whether a crop can be taken more advantageously every second or every third year, but we are satisfied, with a moderate dressing for the corn, the rotation might be of three years duration, affording alternately corn, rye, and clover, the last to be added entire *when dry*, to the soil, for its improvement. Green crops are never used as improvers, they always being allowed to mature before turning under. Plaster should always be added, unless ashes or lime can be more economically applied; but the former is limited in supply, and the latter is to be had only at a price which will effectually prevent its use in this region.

Here, then, we have a *system* for reclaim-

ing barren wastes within every one's reach; costing nothing, and yielding a great deal; and if this were rigidly carried into practice, how soon should we see the naked sand banks, that exist, to a greater or less extent, everywhere between the Alleghanies and the Atlantic, converted into verdant, luxuriant fields. Yet for the want of the application and steady perseverance in this plain, straight forward, simple course, how many will continue to live on in ignorant poverty, when they might, with less toil, and the use of a moderate share of intelligence, have a competency. A single bar left down in this practice, lets in the whole herd of Pharaoh's lean kine. Without the roller and plaster you get no clover; if you cut off the clover when grown, you get no subsequent crop; or if you crop too closely or rapidly, the clover-bearing properties of the soil are exhausted, and new manures, or years of idle, wasteful fallow are necessary to resuscitate it; whereas, by a careful observance of the above plan, the ground is constantly and profitably at work, bearing its burthens on equitable shares, giving one half or two thirds to you, and reserving the remainder to itself, to enable it to continue the supply. Though Mr. C. does not connect any grazing or stock-feeding with these operations, it is easy to see how it can most advantageously and profitably be associated with them. Cattle and sheep can be put on to the rye fields both in fall and spring, when sufficiently thick and stout to justify it, and when well sodded over with clover, what more mutually advantageous to cattle and land, than such a copartnership.

We must add a word for the benefit of such of our readers as have no sandy or sterile soils, nothing but virgin fertility, falsely estimated to be exhaustless. We beg all such to consider that the principles for reclaiming, are the principles for *preserving* also; that no land is so rich but that it can be exhausted, unless fed by inundations, and that there is more profit in sustaining their lands in the highest condition of fertility, than by a wasteful system of cropping, first to reduce them, to be resuscitated again by slow and painful efforts, or abandoned to posterity to be gradually reclaimed by the sure, though dilatory, operations of nature, to that state of fertility in which they might easily have been preserved.

There are some particular advantages that attach to the tillage of light sandy soils. They require the least possible effort to plow and harrow, and these operations can be per-

formed at all seasons when not frozen; no season is too wet, too late, or too early for them. They require no underdraining, and the food for vegetables, in whatever shape it is added, however crude and indigestible, is immediately converted into pabulum for the required crop. The amount of corn and rye afforded per acre would not satisfy a western farmer, and very properly too, but he must recollect that his prices seldom exceed one-half those obtained at the east, rye and corn being worth usually 60 to 90 cents per bushel, and the straw and stalks go far towards meeting the costs of cultivation. The luxuries also, of good buildings, which are always to be had for less than cost, good roads, schools, and churches, and all the accompaniments of a matured and well ordered society are at hand, and are cogent reasons for reconciling the reflecting mind to the absence of that superabundant fertility which so universally characterizes the west.

RECLAIMING A PEAT SWAMP.—At no considerable distance from the theatre of operations above described, we went to look at others scarcely less interesting. On the premises of David Lee Child, Esq., we found a peat swamp of some 30 acres, of an oval shape, having a ditch of sufficient depth through its longest diameter to drain off the surplus water this kind of soil is so avaricious of retaining. An additional ditch around the circumference to arrest and conduct off the surface water that rushes down from the surrounding hills, or silently, beneath its surface, steals along in its deleterious course through the soil below, will complete the architecture of this field. We have then a sufficiently dry surface of partially decayed vegetable matter reaching to an unknown depth, say from 4 to 20 feet. Its extent may be judged of from the fact, that after draining the swamp some 15 years since, the surface has fallen several feet, requiring the outlet to be deepened to carry off the water from the subsiding soil. Here, then, we have a vast fund of geine, or food for plants, for all estimated purposes, perfectly inexhaustible. The tyro in agriculture would say, we have here a boundless fertility, we have only to sow, and an abundant crop will reward the effort. Try it. Plant your corn, and sow your oats, and scatter your grass seed, and let us see the result. There it is; the corn about a foot high this 8th of August, looking for all the world as if it had just got up and ashamed of itself and kinsmen, was trying to get back again as quick as possible; the oats thin and meagre,

scarcely indicating which way they are going, whether up or down; while the cultivated grasses, if they exist at all, are so deep in the mire, that the rank wild weeds, indigenous to the soil, lord it over them so proudly that they scarcely deign to notice their poverty-stricken neighbors. But let us look a little further. Here is corn 10 feet high, and still spreading with a rankness and luxuriance that would excite the envy of the owner of the richest alluvial bottom lands. Here are oats, so tall and heavy, that but for their denseness, they would be a mass of horizontal straw; and the clover is only exceeded in height by the oats, while, in weight, it is their full match. What makes this great contrast, a difference as wide as between a famine and a surfeit, a drought and an inundation? This unsurpassed fertility has been produced, simply by carting or sledding on to the land in winter, 150 loads of gravel to the acre, that exists within a few rods on every side of it, at a cost of 6 to 10 cents per load. This is all that has caused the change, and the same operation that has effected a drain from the swamp, affords the required material, while the ditches which have been made through it, of some 4 feet in depth, and tapering from 4 feet at top to two at the bottom, afford the richest top-dressing for the adjacent hill-side of hungry gravel. We saw here melons and garden vegetables, potatoes, and other roots, growing with a luxuriance that a primitive settler of the prairies might well envy.

We are aware that that eminent agriculturist, Mr. Phinney, has found the top dressing of gravel, sand, or clay, (for they all produce a similar effect, their chemical character not varying materially, though their mechanical condition is widely different,) has not produced a sufficient effect to continue these large crops, without the addition of a top dressing of some twenty loads of compost manure to the acre, when the coarse natural grasses have pushed their way among the cultivated ones above. A less quantity of stable manure carried on, and intimately mixed with the gravel and soil, would answer the same purpose, and lime and ashes might be added with great effect. When once thoroughly laid down, these lands will remain for years, affording immense crops of hay, and whenever turned over for tillage crops, will afford the largest yield. Mr. Phinney states that 75 bushels of corn, 500 bushels of potatoes, and 4 to 5 tons of hay per acre, are the crops from such land. And so

valuable does he consider them, that he has refused to sell off the peat, which constitutes their foundation, for 500 dollars per acre.

WHEAT.—On the adjoining hill we found a good crop of spring wheat growing, without disease or injury from any cause whatever, which will yield at least 20 bushels per acre, worth usually, at that place, \$1 50 per bushel. We noticed but one part of the crop that was lean, which was caused by a spring which had not been effectually carried off by an under drain constructed for that purpose. This, and several other equally promising specimens of the same grain, we saw growing in the town, convinced us that care and attention alone are requisite to furnish their own tables with flour; these, the policy of our country, by shutting up their manufactories, is fast compelling them to adopt, thus forcing them into an unwilling rivalry with the great grain-producing states of the west.

LARGE CROP OF OATS.—Judge Lyman, of N., showed us a field in the meadows adjoining the river, from less than three acres of which, he has harvested the present season, 240 shocks, which it was estimated would yield about one bushel each. This yield is great, even for these rich alluvial lands; but we should prefer seeing the measure applied, before allowing *quite* a bushel to the shock, affording, by the estimate, over 80 bushels to the acre. We should be gratified to learn from him the exact weight of threshed, clean grain, as these results are useful in stimulating and directing the efforts of less careful and scientific agriculturists.

His mode of preparing the land for this crop, was simply to carry on a liberal supply of compost and stable manure last fall, which was thoroughly incorporated with the soil by the plow and harrow.

IMPROVEMENT IN FARMS.—We were delighted to witness everywhere an increased attention to this first and most necessary branch of human labor. The improvement in agriculture, at the present moment, in the United States, is making incomparably more progress than at any previous period. There is an intelligence, and vigor, and steadfastness, in the pursuit of the best modes of farming, which has not before been witnessed. Inroads are making in the quagmires and swamps, that have been allowed to stagnate undisturbed for ages, sending their fetid exhalations abroad to poison and corrupt the atmosphere, the superabundant water is drained off, and the whole becomes a luxuriant, profitable, and healthful appendage to

the farm. The alders, and black jacks, and swamp willows; the brakes, the ferns, and the lichens are converted into vegetable mould, to give additional fertility to the already accumulated stores of vegetable food. Better selections of seeds are made, adapted to the particular soil where grown, better tillage is adopted, more roots are produced for stock, and a large increase in the average crops is everywhere manifest. We think, from all the testimony we could gather, and the observations we could make, that an average increase of twenty per cent., in crops from the same land, is now produced over the yield of ten years since. If we add to this the introduction of superior and more profitable breeds of domestic animals, we have an amount of improvement that may well encourage the lover of his country to look forward to the future for increased abundance and prosperity for the population which is to succeed him.

SAXON SHEEP.—Theodore Strong, Esq., of N., has a beautiful flock of 700 sheep, one half of which are the descendants of the choicest specimens of the first imported Saxons, and the remainder are high crosses of them with the finest Merinos; but owing to the miserable condition of our woollen manufactories, the fleeces are unsaleable at any remunerating prices. The late Mr. Watkins, of Middletown, Conn., a gentleman of great enterprise and intelligence, and large experience in manufacturing, both in England and America, formerly bought his wool at \$1 50 per lb., and assured Mr. S., when his wool would not bring \$1 00, the factories in this country would be obliged to close their doors. The article, at the present moment, would hardly command one-half this price, and as predicted, what few mills are still left in operation are probably running at a decided loss.

MOUNTAIN PASTURES.—During our stay in Hartford, for two or three days, we accompanied D. C. Collins, Esq., to some of his hill lands. We do not recollect ever before to have seen the immense difference between good and poor management in pastures that we here witnessed. One of these, consisting of 34 acres, lying within two miles of the Summit Tower on Falcott Mountain, and elevated at least 500 feet above the river, was covered in almost every direction with tall rich grass, red-top and blue or June grass predominating, with a considerable undergrowth of white clover. The fields adjoining it, on every side, though pasturing less than half the number of cattle and sheep, were

gnawed down to the very gravel, and from appearances, would not afford one-fourth the quantity of grass. The difference Mr. C. explained to be, that his own had been undisturbed since the original forest was cut off, while the others were occasionally turned over and exhausted by a meagre crop of rye, whenever they would yield enough to pay the labor, and were then turned out, like a superannuated horse, without care or provender, to recruit as best they might. No seed was ever sown upon them, no manure ever added to them, and the consequence is, that instead of always affording a plentiful growth of pasture, they yield barely sufficient to pay taxes and repairs of fences.

Another field belonging to Mr. C., of 14 acres, was still more remarkable. It had pastured during the summer 10 grown cattle and 36 sheep, yet the white clover lay on the whole surface, one prostrate, tangled mass of herbage, in which the foot was buried at every step. On asking a solution of this, we were told that, like the former, this had never been cropped since the clearing off the wood, and in addition, it had, last spring, a top dressing of one bushel of plaster per acre, and to this was the exuberant growth of white clover entirely owing. A small corner of the field, which had been omitted, had good grass upon it, but it was the red-top and blue grass, with a small growth of white clover underneath. The plaster caused the clover to change places with the grasses, and gave that the undisputed preeminence. The quantity of unconsumed herbage on the ground, at a moderate estimate, we should judge would not fall short of three-quarters of a ton to the acre when cured. We may cease to wonder why some people grow poor, while others grow rich, in cultivating adjoining fields under the same advantages.

SHORT HORN CATTLE.—Mr. C. has a small herd of very choice Short Horns. These have large size, for their ages, being mostly young, possess fine hair, fine form, admirable milking properties, but are especially distinguished as handlers. This is a point Mr. C. has wisely considered of the first consequence, and it will tell hereafter in the results on his stock, like inbred truth on the human character. In this kind of stock, if handling and milking go together, the breeder may let other things look after themselves. If these go right, nothing else can well go wrong. We are prepared to see a distinguished race from these choice specimens.

RAMBOUILLET SHEEP.—The flock of sheep, consisting of 37 ewes and 13 rams, including

lambs, originally selected by Mr. C. personally, from the celebrated Rambouillet flock in France, excited our unqualified admiration. The imported ram, and several of the ewes, could only be procured after they had been used in the national flock as far as it could be done with advantage. They possess unusual size for Merinos, with excellent forms and good constitutions. But their chief excellence consists in their immense fleece of fine wool. By fineness we do not mean to be understood that they have that silky texture that characterizes the Saxon alone; but while the fibre is equal to the best of our original Merinos, the quantity surpasses any we now recollect of the same quality. As a proof of this, it is only necessary to state that the ram sheared this spring, of tolerably clean wool, twelve and three-quarter lbs., and a yearling ewe, weight ten lbs. The average we omitted to obtain, but if we are not mistaken, it was between six and eight lbs. The growth of wool on them is enormous—it is wool all over, and nothing but wool. They seem fully to come up to their destiny, being preeminently wool producers, as there is scarcely an inch square on their whole surface that is not covered with *fine wool*. And it not only grows on the whole body, head, and legs, but the massy folds on the neck and thighs, and sometimes around the body, not only on the males but frequently on the females, with the large dewlap peculiarly characterizing this superb race, yield a surface to hang the wool on not afforded by any other race than the best Merinos. These have been imported at a large expense by Mr. C., for the express purpose of restoring the Merino flocks of this country to their original high character, and we think he has just the material in his hands to effect so desirable an object.

Handling Stock.

There are a great many persons, who do not understand even the significance of the term *handling*, as applied to cattle, sheep and swine. It is a subject pretty difficult for words alone to explain, and to thoroughly learn it, one must go into the cattle yard and sheep pens, with a good instructor, and do so from the living subjects themselves. A knowledge of *handling* is of the *first importance* to the breeder and grazer, and if ignorant of it, they can never produce animals of quick feeding properties, unless guided by others, or by mere chance.

As well then, as the term *handling* can be defined on paper, it is this. When we press

the fingers upon the fleshy parts of an animal, and the hair, hide, and especially the flesh beneath have a fine, soft, firm, elastic spring, it is called *good handling*,—on the contrary, if they are coarse, thick, hard and rigid to the feeling, with little or no spring under the pressure of the fingers, that is called *bad handling*. Of course there are as many degrees in handling, from very bad to very good, as there are grades of animals. The better an animal handles, the kinder or quicker it feeds; that is, the sooner it will mature—become fully grown for the purpose of breeding, or to fat for the butcher, and will do so at a much less consumption of food, than a bad handler. By cultivating therefore, a race of cattle that handles well, there is a saving in two ways; first, we gain time; second, we gain food; as a good handling steer, for instance, will be fully grown and fat for the butcher, the fall after he is four years old; whereas, it will take the bad handler, two to three years longer to mature and become fat, and at this time he will weigh no more than the four years old steer; and the quality of his meat will not be as good. The breeder of this last, then, has lost at least two years interest on the amount of money for which the first sold, two years more of risk by accident and disease; two years more time and attention to his animal, and two years additional consumption of food; which together, makes a difference, probably, at least, of fifty per cent. in favor of good handling beasts.

So important is handling considered in England, that when the grazier comes to purchase stock of the breeder to feed through the season, to fat for the butcher, he would rather buy his animals *blindfolded*, and *handle* them, than by an inspection of the *eye alone*, without handling. This observation applies more particularly to the *improved* breeds of cattle; the *unimproved*, such as the Scotch, Welsh, and from several counties of England, are judged by the eye alone; still, when not too wild to get his hand upon them, the grazier, in purchasing, will always feel their fleshy parts with his fingers, the better to assist his judgment in a profitable outlay of his capital. Lectures ought to be publicly delivered on this subject with the living animals before the auditors at all our cattle-shows, for our breeders and graziers are deplorably ignorant upon the point of good or bad handling.

It is said sheep bells *will* protect lambs from foxes.

Cultivation of the Mulberry and Production of Silk.

As we deem the raising of silk one of the prominent objects of attention to our farmers at no distant day, and one every way commending itself to their careful consideration now, we shall proceed to give a brief manual on the subject from our own observations and that of others. The first step to be taken, is the selection and raising a sufficient number of plants, which shall be the best fitted for the production of silk. Trees it is not necessary to have. A long time is required for their growth, and when matured, they require much more labor in gathering the leaves, as it must then be done by the use of the ladder, and the leaves are no better suited to the object in view than from somewhat younger plants.

VARIETIES OF TREES.—Some of the choice trees which are produced from the white mulberry seed, are generally esteemed best by silk growers. It is a well-ascertained fact, that the mulberry, like the apple, pear, and peach, does not produce its like from the seed, and it is therefore a safer method to depend on cuttings of the best kinds, as they can be produced at but a trifle more cost than from the seed. The kinds most used in Northampton, Mass., where a large quantity of silk is produced, are what are termed the Asiatic, extensively used in China, and the Alpine, a species brought from the south side of the Alps by Mr. Samuel Whitmarsh when he visited Europe some years since. He says, though better adapted to the purpose of feeding worms than any he met with in France, it was limited to a small district. These are doubtless selected varieties from the white mulberry seed; but as they unite all the essential qualities to a greater extent than any others, whenever they thrive well on a soil, it is wise to adhere to them. But it is prudent to sow a quantity of seed, and as the plants grow up, select such as are best suited for feeding. The characteristics for this can usually be distinguished by the appearance; though perhaps the only strict test would be, a comparison of the quantity of silk produced from equal quantities of leaves. The above varieties are distinguished by a tolerably large leaf, twice or three times the ordinary size of the common white, yet not as large as the *Morus*. The leaf is firm and thick, and affords a large supply of substantial food for the worm. It is highly important that the leaf be not too juicy or succulent, as the worm is by this means obliged to consume a much larger bulk of food to derive the required amount of nourishment,

than would otherwise be necessary, which renders the worm peculiarly subject to disease. The *morus multicaulis*, we are sorry to say, after all the eulogium and attention it has received, is illy adapted to producing silk. Like many of the Wall-street fancy stocks, it was a capital stock to speculate on, and like many of them, too, the amount of sales was no index of the value of the article. Like the red and black mulberry, the *multicaulis* will produce silk, *but not of the best quality*, and there is so much sap in it, that the worms are very liable to disease while feeding on it. We believe growth of these last kinds on a dry sterile soil will increase their value for feeding, and diminish the liability to disease in the worm.

THE BEST MODE OF RAISING THE TREES, is placing them about 4 feet apart on one line, and 6 to 8 feet, according to the fertility of the soil, in the other direction. This will allow sufficient room for the top to develop itself, and absorb all the nourishment afforded by the roots. The ground should not be too rich or moist where the trees are planted; a moderate quality of soil, of a dry gravelly nature, produces leaves of more substance and less liable to injure worms than ranker ones. They may be propagated from seedlings, but this, we have seen above, is not a certain way of producing good varieties, and should be resorted to only to supply existing deficiencies, and perhaps occasionally to produce a new and valuable variety. The best mode of producing them is by cuttings made from a healthy, vigorous shoot, consisting of two buds to a stock, each of which is put into fine, mellow mould in a slanting direction, placing one bud deeper in the ground than the other, so that one almost invariably sprouts, and generally both.

THE MODE OF CUTTING LEAVES, may depend upon the fancy of the proprietor and the circumstances of the case. The feeding is performed with much greater facility when the branches are cut off and laid on the shelf in the form of net-work, as the worms crawl over them in every direction: thus gaining more room, keeping out of the dirt, and allowing a free circulation of air. But the plant should be so trimmed as to allow a bushy top, and not be suffered to get up too high, beyond reach of the person gathering the leaves; although there is no inconvenience from this while the stocks are not too large to admit of bending down to be cut. Though we have seen no plants thickly cultivated that have attained sufficient diameter of trunk to enable us to form an opinion,

our own impression is, that after the main stalks have a circumference of 8 to 10 inches, it will be best to cut them down and train up fresh shoots. But experience will be the best guide in this matter.

KINDS OF MANURES AND MODE OF TREATMENT.

—Mr. Whitmarsh, in a small work he wrote on this subject four years since, which he was kind enough to present us the other day, with the remark that his subsequent extensive experience had not induced him to vary from the practice therein described, says:

Light land, planted with the mulberry will yield a large profit by the sale the leaves only, or by having them fed on shares.

Every farm has more or less of black vegetable matter collected in hollows and swamps, usually called muck, which is the best manure for the mulberry, causing it to flourish on very light and sandy soils. The muck should be thrown up in the fall to freeze and sweeten, as the gardeners say; before planting the trees, put it into the furrows or holes, and the trees, once started in it, will continue to flourish for many years. No mulberry tree should be manured with fresh barn manure; it is rank poison to them, and is one great cause of their being winter-killed. The well rotted vegetable matter above mentioned is the best and most durable manure. It causes a thrifty natural growth. A little ashes or lime may improve it in some cases. Old woolen rags, bones, fish, and all animal substances are useful; but the muck, which is within the reach of almost every one, is the cheapest, and on a large scale, the main thing to be depended on.

Mulberries, when planted out, should be kept clear of grass and weeds, and the ground loose about them. They delight in a mellow soil, and when once well established in a healthy state, will continue to improve for twenty-five years, if well used. We are told by some, that "the more you pick them, the faster they will grow," the fallacy of which must appear to every one who will for a moment consider the nature of the operation of stripping a tree of its foliage once or more every season.

We are also told that several crops may be fed from the same trees in a season;—this you may do if you do not regard the durability of the tree. Once a year is quite often enough to strip them of leaves or branches. Several crops of worms may be fed in a season, but not from the same trees. Trees enough should be provided to make a second picking unnecessary. We have land in abundance; and the same building may accommodate a succession of crops fed from a succession of acres.

I would not have my readers place implicit confidence in what I say on this subject, as I may be mistaken. But let any one who doubts it try the experiment;—set apart a few trees, no matter of what sort, and pluck the leaves as many times in a season as you please; it is possible that the leaves may diminish in size and quantity by the operation, and it is also possible, that after a year or two, there will be no leaves at all, that the trees will perish in summer or winter—most likely the latter. It should be considered that what is called a hardy tree is not merely one that will endure cold winters, but the clipping, picking, and hard usage which they will be likely to receive according to our mode of treatment, when they come to be fed from.

In making a plantation for the culture of silk, we must suppose it, of course, to be a permanent one, which shall be a continued source of profit, the profit

increasing with the age and growth of the tree, if well used: and nothing is better repaid than good care and cultivation for the mulberry. We shall need much less care than the cultivators of Europe, as the mulberry thrives much better in this country and makes a much more luxuriant growth,—so much so, indeed, that I have seen intelligent men, who had extensive acquaintance and experience with the mulberry in France and Italy, quite at a loss amidst our fields, to recognize their old acquaintance—varieties which they have long cultivated at home, here quite changed in appearance. They could scarcely believe the fact, when shown a year's growth of the mulberry in this country.

The mulberry delights in the hottest sunshine,—never too hot, if moisture is seasonably supplied. Our bright sunshine and frequent showers cause an almost too luxuriant growth of the mulberry, in some cases detrimental to the worms.

The leaves are undoubtedly improved by the age of the tree, having less of the rough, harsh taste and feeling that are common to the plants of younger growth. It is found in Europe that the worms succeed best when brought out simultaneously with the leaf. They are generally hatched much later in this country, and the general character of vegetation differs so materially from that of the silk districts of France and Italy, and withal so extensive is our country, and so various its climate, that I can give no better rule than for the *North* to aim at the most genial and steady heat, and for the *South* to endeavor to finish the crop before the hottest season commences. Excessive heat is more to be dreaded than cold. Cold only retards the worms; excessive heat destroys them. An equal temperature of about 72 degrees of Fahrenheit is most to be desired.

The soil must be warm, gravelly, or sandy. It is often said, that "the poorest land is the best for the mulberry." It is not so. It may with truth be said, that the light lands of a farm—too light for a profit in other crops—may be most advantageously planted with the mulberry, and in a few years, by proper treatment, be made more profitable than richer lands planted with other crops. I have seen many acres set out with mulberry trees, the soil so poor that blackberry briars would starve; whilst mulberry trees from four to eight feet high, with full heads were set in the barren sand; and because they would not *begin* to grow, "the silk business was all moonshine." Now, had the holes been filled with *muck*, and the *heads of the trees cut off*—poor as the soil was, they would have made a good growth, and in a few years, when well rooted, produced a good crop of silk.

Lands that are considered worn out for corn or cotton may thus be made productive, and of the best silk. The mulberry strikes its root deep, and when once established, will do better on light lands than any other tree. Lands which will not grow twenty bushels of corn to the acre, manured, are quite strong enough for good silk, if on a gravelly or sandy bottom. Such lands, by the application of ashes, lime, mud or muck or compost of all kinds, will produce vigorous trees, with the sweetest foliage, and silk of the best quality, and much more than lower, richer lands. It is the *dry* nature of the leaf on such lands that makes the silk so superior.

Having thus given the first steps to be taken on the subject of silk culture, we must deny ourselves the pleasure of pursuing it further in this No. for want of room, but will continue it hereafter, till we furnish the silk handsomely done up in skeins. We cannot

here omit mentioning the fact of the splendid success of Mr. W. in the introduction of the silk business in Jamaica, W. I. He has been a resident there for two years, in which time he has so satisfactorily demonstrated the capabilities of the island for producing silk, that a company has been formed in London, to which the British Government have contributed largely, with a sufficient capital to carry out the operations on the most extensive scale. Mr. W. hopes for a yield of 10,000 lbs. of reeled silk per month; but this, we think, is too large an amount to look for from any one establishment. We see in this the ever watchful, ever liberal policy of Great Britain, in appreciating and fostering whatever is calculated to promote her own interests. Here are two magnificent productions, silk and cotton, which are essential to the prosperity of her manufactories, and which she cannot raise on her own soil; yet she has the sagacity to see, and the liberality to encourage at any cost, their introduction into her provinces, by which she will in a few years inevitably increase her wealth to an immeasurable extent. Mr. W. has an elevation on one of the mountains that abound in those islands, a few miles from the coast, that affords an unvarying temperature of 70 to 75 degrees, which is the best adapted to the operations of producing trees and silk. The condition, character, and habits of the emancipated inhabitants, he represents as in the highest degree favorable to the development of the resources of the island. We wish him every success in his undertaking.

Preservation of Grapes and Must, or the Unfermented Juice of the Grape.

Among the many striking changes that characterise the present day, perhaps none are more auspicious or salutary than the diminished and constantly lessening use of alcoholic and vinous drinks. The effect that has already been produced, has begun to be severely felt by the agriculturists of this and other countries. The sugar planters of the West Indies have found it impossible to dispose of so large a portion of their rum hitherto manufactured from their coarse sugars and molasses; and the inhabitants of the Mediterranean can, no longer distil their raisins into alcohol, at the same profit as heretofore, and the wine they have hitherto furnished in such large quantities from the direct fermentation of the juice of the grape, is daily becoming less an object of manufacture. The distillation of millions of bushels of rye, and corn, and other products

in our own country, has lessened, and even the wines we have made to a considerable extent to the south and west, will not, it is believed, continue to afford a profitable sale. Large quantities have, for many years, been furnished from the Swiss settlements on the banks of the Ohio; and from 6,000 to 10,000 barrels are annually furnished from the Scupenaugh grape in North and South Carolina, which finds a profitable market in our city under the captivating title of London particular, Teneriffe, Sherry, &c.

The cultivation of the grape is extending, perhaps, at this moment, faster than at any former period in the history of our country, and as our forests are removed, our lands cultivated, and our improvements in every species of farm husbandry multiply, we must look for an increased attention to the luxuries of life, among which the grape especially, in ancient times, ranked as one of the first. Our object in the present brief article is not to discourage the production of this delicious fruit, but in accordance with the spirit of the age, to give some directions for its preservation and use in its new, more delicious, and more healthful forms.

Many species of the grape itself may be preserved in all their richness and perfection, by simply cutting off the clusters and packing away carefully from the influence of the atmosphere in any close vessel, between layers of some soft indestructible material, to prevent their injury from pressure or otherwise. Sawdust or any kind of bran which has been thoroughly baked, is best for this purpose. The moisture is thus entirely expelled, and it is in a condition to absorb any moisture that may escape from the fruit, by which its preservation is effectually secured. In this way the grape may be preserved for use through many years, and afford at all times the most delicious fruit for entertainments or deserts.

But its more easy and more durable, and perhaps, on the whole, more useful preservation, would be in the form of a liquid, which is, under all circumstances, and for any length of time, free from liability to injury or waste. This can be easily done by any one having a surplus of grapes, by evaporating a certain portion of the juice, as soon as it is pressed from the fruit, which carries off the alcohol that begins to form immediately after the fruit matures, and with it a considerable portion of the water existing in the juice, leaving a thick, sweet, pleasant liquid, commonly distinguished as *must*. This may be preserved in bottles or casks for an indefinite

period, and affords at all times, when diluted with 5 or 6 times its bulk of water, a healthful and delicious drink.

This innocent, and to the unvitiated taste, most acceptable form of the liquid fruit of the vine, is on good authority, supposed to have been the beverage which was *generally* referred to by the sacred and many of the profane writers, by the term *wine*. In direct proof of this, we have numerous allusions by Isaiah: "new wine is found in the clusters," and "now shall the sons of the strangers drink thy *must*;" and "they that gather the vintage shall drink it." In the feast of the Passover, Moses writes expressly, "neither shall there be *leaven* seen with thee in all thy quarters," which Gesenius, an able orientalist, says, applies to *wine* as well as bread, an interpretation sanctioned by the Jews of the present day, as no *wine*, in its common acceptance, is used by them during this period, but a liquid, formed by steeping raisins in water for some days, which yields a product similar to the juice of newly-expressed grapes. The expression "eat ye of the fruit of the vine," and "I will give the *fruit* of the land, corn, and *wine* and oil, and kine and flocks of sheep," can refer only to the use of the *unfermented juice of the grape*, which was in general use by the Hebrews and other ancient nations, and in this condition, is a highly nutritious *food*, which the fermented is not. "The priest of the Most High God brought forth bread and wine" to Abraham and his hosts, and it is not likely that so discreet and exemplary a man as Melchizedek, would have placed the means of indiscriminate debauchery in the hands of an uninformed and gluttonous soldiery. Zechariah says, "Corn shall make the young man cheerful, and *new wine* the maids." We have no evidence that the lords of creation have ever indulged the weaker sex in stronger potations than they allowed themselves, and of course must conclude, the *wine* they gave the fair Jewess, no more calculated to intoxicate them, than the corn they ate themselves. "*Wine* and milk," are frequently associated in the Scriptures as *food*; both Isaiah and Solomon in his Canticles, repeatedly mention them together, and *must*, though liquid, like milk, is nutritious food.

Homer also speaks of rearing *children* with honey, milk, and *wine*—could a person of Homer's capacity have recommended *fermented* wine for children? Milton in his immortal Paradise Lost says, "For drink, the grape she crushes, inoffensive *must*, and meaths from many a berry;" a graphis

example for our comfort-providing housewives. Horace too, the dissipated pander to a luxurious and vitiated taste, steeped in all the vices of a dissolute court, advises—

“With *lenient beverage* fill your empty veins,
For *lenient must* will better cleanse the veins.”

Juvenal, among the last of the great wits of depraved Rome, recommends the plentiful use of new *must*, as promoting longevity; and Virgil in many instances refers to it, only one example of which we give—

“Or of sweet *must* boils down the luscious grape;
And skims with leaves the trembling cauldron’s flood.”

He also advises giving *wine* to bees, as do also many of the best old English writers on agriculture, and we need not be told, that bees were always too strictly a temperate community, to admit their using aught of the product of the grape but such as was unfermented. Columella gives particular directions for its preparation, as does also Pliny and some others among the ancients. Mr. Brown, an eminent traveller in the East during the latter part of the last century, says, “The wines of Syria are most of them prepared by boiling immediately after they are expressed from the grape, till they are considerably reduced in quantity, when they are put into jars or glass bottles, and preserved for use.”

That fermented wine was used to some extent by almost all the nations of antiquity, there is no reason to doubt, as Noah became intoxicated from its use, and Moses refers to the Pagan sacrificial wine, in colors too true of much of that of the present day, to admit of its being other than fermented: “Their *wine* was the *poison of dragons*, and the *cruel venom of asps*.” The evidence for the existence of both is abundant, but our object is only to show, that at least a large portion of what is referred to as *wine*, was what is now termed *must*, and that by returning to this wholesome and innocent beverage, we are only going back to the simplicity and wisdom of antiquity; and with the few observations which follow on its preparation, we must close this hasty article.

As soon as the grape is fully ripe, press out the juice and boil immediately, till it stands at 32° of Beaümé’s saccharometer,* at a temperature of the liquid of 60° Fahrenheit. When the juice is very light, (weak,) boil till it marks 20° Beaümé, and then add treble-refined loaf sugar, till the saccharometer stands at 32°. Any impurity in the sugar tends to fermentation and decomposition, and of course only the best refined should be

used. The rationale of this process will be easily understood from the fact, that a fluid mass of wine containing 10 per cent. of alcohol, has only to be reduced by boiling 10 per cent. of its bulk, to be sure of expelling every portion of alcohol; it being the most volatile portion of the liquid, and thus escaping first before any portion of the remainder of the fluid is exhausted. Those who cannot boil it at the time of expressing the juice, may allow it to ferment and form a portion of alcohol, which by the above process may be expelled afterwards. But as a portion of the sugar of the juice, has, by this operation been converted into alcohol, it is necessary to restore it as above described, by the addition of sugar. In this way wine imported from abroad, and kept for any number of years, may be freed from alcohol, and be made acceptable to the most strictly temperate. Of course the most economical method is to raise the grapes, and prepare the must as soon as ripe.

Sheep on the Western Prairies.

We have received a communication from Jas. Murray, Esq., of Buffalo, on the subject of keeping sheep on the prairies of the Little Vermillion river, La Salle county, Illinois, where his farm is situated.

He purchased 1,700 sheep in Ohio and Indiana at 75 cts. to \$1 per head. He chose those of the black-faced breed, because he thought them most hardy, they having a strong resemblance to the Cheviots of Scotland. They are managed by two Scotch shepherds, with the assistance of three colley sheep dogs. They are taken on to the prairies by dogs, and folded every night in an enclosure of ten acres, protected by a high picket fence; in this way he has never lost one from the wolves. The cost of the pasture is trifling, the board and wages of his shepherds \$16 per month. One ton of hay will winter five sheep with the assistance of a few oats or corn to keep them in heart. It costs about \$2 per ton to cut and stack the hay. He uses one barrel of salt per month, and the sheep have ever been perfectly healthy. He lost six only last year from rattle-snakes, and these were in Aug. and Sept. at which time the snakes become partially blind, and cannot avoid the sheep; and if trod upon, they turn and bite them. We would suggest, if hogs were allowed to run with the sheep, they would destroy the snakes without injuring themselves, and the Chinese breed, or smallest and most compact Berkshires, would keep in good order on

* An instrument to be had in this city.

the same pasture where sheep would thrive. Mr. Murray's sheep clipped 3 lbs. of wool per head this season. Cost of importation from Vermillion to Chicago 1-2 cent per lb., Chicago to Buffalo 1 cent, Buffalo to New York 1 cent, making 2 1-2 cts. from his farm to this city. The wool is now worth 20 and 25 cts. per lb.; it will therefore be seen, that growing good hardy sheep on the prairies of the west is a profitable business, and what we have long and earnestly, in a private way, been laboring to promote.

Land suitable for the purpose can be had west for government price, \$1 25 cts. to \$4 per acre, dependent upon location and improvements. Mr. Murray's farm is about 1,600 acres of very fine dry rolling prairie. About 300 acres of this is in scattered timber, called oak openings, which are much like the English parks. When the weather is hot the sheep retire to these for shade; during the cool of evening they seem to prefer the low marshy land along the stream. Mr. Murray is partial to many of the natural grasses of the prairies, and says the sheep thrive well upon them. The milk weed, *Asclepias*, they are very fond of, and fatten remarkably fast upon it.

A simple method is adopted by Mr. Murray of seeding the prairies with the cultivated grasses, by commencing in June, and burning the wild grass gradually through the season, in 30 acre patches. White and red clover, red top, timothy, and blue grass seed are then sown, and immediately after a shower the sheep driven over it, which stamps the grass seed in, and it then takes root rapidly. Early and late natural grasses can also be secured, by burning the prairies in Sept. for early, and from March on to July for spring, summer, and autumn.

The picket fence round the ten acre field is 7 1-2 feet high, over which no wolf has ever yet leaped; this, with a sufficient number of sheds to protect the sheep from storms in winter, and with hay-racks for feeding, cost \$263.

Mr. Murray is now inclosing his farm in 50 acre lots. Timber is scarce there, and he makes his fences 5 1-2 feet high, of posts, and boards, and pickets. Two feet of the bottom with boards, then 3 1-2 feet of upright picket slats, 4 inches wide. This costs 90 cents per rod, is cheaper in that country than rails, and is neater and more sightly. It costs about \$1 75 per acre for the first breaking up of prairies. He thinks of adopting the four course system on his farm. 1st year, after breaking up, Indian corn. 2d

year, oats sowed down with clover and other grass seeds. Two years then in hay and sheep pasture. We are confident that his land will improve under this system, and that the whole concern will be a good investment. We think, however that the fine woolled sheep, such as the hardier varieties of Merinos, would be more profitable than the black faced Cheviots, or indeed than any of the common wools, yielding half to one lb. more wool per head, which will be worth 50 per cent. more in this market, (N. Y.) while the cost of transportation would be the same. The outlay of capital, in the first purchase of a flock, however, would be greater, which is the only consideration in favor of omitting the introduction of the finer wools at once.

SOILING CATTLE.—We are satisfied many of our Stock owners might adopt the soiling system to great advantage. When they have few animals and pasture is remote, or when ever land is high, it may most advantageously be adopted. We were particularly struck with the economy of this operation in the yard of our friend S. L. Hinckley Esq. of Northampton, which we intended to have noticed under the farming head of that town. The stock at his residence consists of three horses and two cows, which instead of sending daily to a distant pasture, he has fed at his yard during the whole season, from less than one and a half acres of orchard grass. The horses while at work were fed with cured hay, with a small addition of grain, but the cows have derived all their food from the grass which is daily cut for them. The saving by this practice, is the use of three-fourths of the land, at least, that would have been required for pasture; a much greater amount of manure, which has been made by converting it into a compost; and half the time that would have been used in sending the animals to gather their own food; the field from which it was cut, being contiguous to the barn-yard, requiring only to be cut and thrown over to them.

EFFECT OF WET AND DRY SUMMERS ON THE SUCCEEDING WINTERS.—We predict a cold winter, from the reduced temperature of the earth when the fall sets in, which will be caused by the abstraction of heat from the excessive evaporation of the superabundant waters which have fallen this season. Can any of our readers give us facts from personal observations on this subject? It will be a principle of great practical value if suf

ficiently well established, that people may prepare their plan of operations for the coming season. Hundreds of dollars are frequently lost or saved to the farmer, by a lucky or unlucky hit in their crops, timber, and other operations. The converse of our proposition was true of last year, the summer being very dry, by which there was little evaporation and consequently little abstraction of heat, and the winter was of a peculiarly mild character.

EFFECT OF ELECTRICITY ON GROWING PLANTS.—We have had a season of unusual thunder storms, and a season, too, of unusual productiveness, notwithstanding the cold and unpropitious character of the early part of it. Some would ascribe the cause of it to frequent and abundant showers, and with considerable show of reason, but the excess of rain which we have had this season throughout, is not the most favorable condition for the greatest development of vegetable life. Can that very reputable personage, "the oldest inhabitant," give us a series of well authenticated observations on this subject? We know that the electric spark conveyed through air enclosed in a jar, will produce nitric acid, and we know that no greater stimulant to vegetation exists, than nitric acid sufficiently diluted, when applied to its roots. Although we are not aware of any direct advantage that would result at present from establishing the above suggestion, yet it would afford a philosophical principle, that may hereafter be of immense benefit in its application.

ORIGINAL CORRESPONDENCE.

For the American Agriculturist.

Weybridge, Vt., Ju'y 15, 1842.

GENT.—I have been very much amazed to see so many portraits of fine animals of the long and middling woolled breeds, got up to ornament our agricultural journals, and at the same time the non-appearance of the finer woolled varieties, which are the only indispensable breeds of our country.

I am satisfied that the Paular Merinos are the most profitable and most hardy breed of merinos that have ever been introduced into the United States.

I have enclosed a drawing of one of my stock bucks, which represents him in his wool at about one years' growth. At the age of four years he weighed just 150 lbs., the fleece was taken off about eight days after it

was washed, and weighed 14 lbs. This Paular buck has tupped each year, on an average, one hundred and twenty-three ewes. I shall keep him with extra care, intending to give him a run among two hundred this fall. His stock, instead of being hollow or cat-hamed, as most fine woolled sheep are, are round and well filled down behind, resembling the improved breeds of cattle. You may see some of my bucks at the fair at Albany in Sept. next.

I would like to see the contrast exhibited between this breed and some of the crack animals of the long woolled breeds, or *bread and butter sheep*, kept in fields side by side on trial of six months, (say one hundred or more,) in short pasture; and by the expiration of the time, I imagine the *points*, especially of the long woolled variety, would be *strikingly developed*.

I allow my ewes to drop their first lambs at the age of three years. My ewes bear the best lambs at the age of five and six. I generally dispose of them at this age, while they are yet in prime and will sell for a fair price. I always dispose of my smallest lambs also. This variety are the longest lived sheep of the merino family; they will live and propagate until the age of twelve and fifteen years.

As to protection on our wools, the admitting the cheap wools imported from foreign and warmer latitudes with little or no duty, is, in my opinion, reducing the value of our home productions to a lower ebb than it would be if the coarse wools paid an increased duty, and the tariff on fine wools were sensibly reduced. It is estimated that something over 17,000,000 lbs. have been imported within the last year, under the foreign cost of eight cents per pound.

Our mechanics have so much improved machinery, and have arrived to such perfection, that the manufacturer can now make as handsome cloth from these cheap wools today, as he could from full-blood merino twelve years ago. These cheap wools can now be raised in those foreign climates where sheep cut their own fodder the year round, and thence be imported into the United States and sold by the bale at from seven to twenty cents per pound, and give the producer and importer a handsome profit. Now mark the contrast. Here our lands have cost us from twenty-five to thirty dollars per acre, and we fodder sheep five months at least in the year. Our farms will keep two sheep to the acre through the year, includ-

ing wood lots and other indispensable et ceteras. I will leave it to the most simple mathematician to cypher out our profits, as wool is selling this year.

Yours, very respectfully,
S. W. JEWETT.

The drawing which Mr. J. has sent us, together with samples of wool accompanying the above, represents an animal of great size, good form, and apparently vigorous constitution, which his history sufficiently indicates. As we are collecting some information on the history of Merinos, we should be happy to receive from Mr. J. and others, the pedigree of choice animals, for the purpose of seeing how their acclimation in this country has affected their size, constitution, and especially the *quality of their wool*. We have the data of their character when imported, and it will afford an instructive chapter in sheep husbandry, to note the exact progress we are making in this important branch of breeding.

The protection Mr. J. so justly calls for to save our investments in sheep from prostration or total ruin, we trust will yet be heard and heeded in the right quarters, before it is too late.

For the American Agriculturist.

Domestic Poultry.

GENT:—Under this head I shall speak of the Barn-door-fowl, as usually kept in our country. It is true that the subject is not so lofty as that of discoursing the merits of a noble, fleet and powerful breed of horses; or of the broad and stately developments of our various improved herds of cattle; nor so nice as that of dissecting with minute accuracy the distinctive merits of the wools of the Saxony and the Merino; nor so palatable, perhaps, as the classifying with epicurean taste the comparative gastronomic properties of the Bakewell and Southdown sheep; yet the good housewife who loves to mix the wholesome ingredients which compose the important parts of her delicious puddings, custards, and the various delicacies that delight her family, and make her friends and visitors *feel* that they are welcome; as well as the stout admirer of a rich and wholesome dinner, and a capital travelling breakfast, will without a doubt, feel interested in whiling away a moment over a chapter on the merits of the poultry yard.

Of this useful and most convenient bird, there are many varieties. Some altogether better suited to the extremes of our northern climate than others, and some perhaps better fitted for our warmer latitudes, which are comparatively worthless at the north. For my own part I have always been intimately acquainted with poultry from a boy, and the first live thing that I ever recollect owning and caring for, was a chicken; and I have kept, and raised them, with few intervals, ever since; and and even now, although the detail of their care is given to others, I as much control and attend to the breeds and varieties of my fowls as I did in my earliest youth. Therefore disclaiming all authority from others, I speak only of my own experience. Of the varieties inhabiting the United States, I have kept and tried them all, from the gaunt and almost featherless, and thin haired African or Asiatic Hen, to the compact and foot-feathered little Bantam, which thrives and flourishes in half the washerwomen's kitchens of our cities. The latitude of my residence is nearly 43° north, with comfortable, well sheltered outbuildings and accommodations for their convenience, and I shall speak of them only as I have known them in *this* climate, and name their qualifications for a latitude further south.

And first of their selection. A barn door fowl, for perfect *utility*, should be compact in shape, hardy in constitution, and miscellaneous in its food, quiet in disposition, and prolific in laying. Without these qualifications, no matter what the climate may be, the creature is imperfect for the uses required of it, and therefore not the *most profitable* to be kept or propagated—still, I will speak of the several varieties as I have proved them.

THE GAME BIRD.—This is a beautiful fowl, of medium size, of almost every color excepting pure black and clear white; a tolerable layer, hardy to raise, and nice delicate flesh; but of a most pugnacious, cruel and sanguinary disposition. They are altogether too quarrelsome for the poultry yard; and as the science of cock-fighting does not class within the useful arts, I shall pronounce them, other than as an occasional cross to give stamina and spirit to a deteriorated and *run-out* yard of dunghill fowls, of little merit for the ordinary breeder.

THE MALAY.—An awkward, bony, leggy, cowardly race; wandering about for the first six months of its life with scarcely a feather to cover its nakedness, and almost forever in coming to maturity—a wretched layer, and worse siter, usually breaking half its eggs in the operation, an indifferent nurse, and never yielding in either its eggs, flesh, or appearance, half enough to compensate for the anxious and vexatious labor of its rearing. When half grown, or in moulting time, it looks more like a sand-hill crane than a domestic fowl, and although it sometimes gains a weight of 7 or even 10 pounds, its flesh is coarse, and lacks the delicacy and richness of the well bred chicken. Its color runs through all shades from a light yellow to a brownish black, with little variety on the same bird. They are withal great eaters, and although at the south they may both thrive and lay better than at the north, they are not to be recommended as a valuable kind of fowl. Their eggs are large, of a buff, or light brownish color, sometimes almost speckled like the turkey's. They seldom lay more than ten or twelve at a litter. The outer shell is oft times very thin, and the under skin so tough and unyielding, as in numerous instances to strangle the chicken in its birth, requiring assistance to release it. On the whole, I have found this a most unsatisfactory bird, and although they have been praised for their great size for the table, and as a tolerable substitute for a turkey, no competent judge of the latter flesh would ever mistake the stringy and juiceless meat of the one, for the rich, delicate and variegated flesh of the other; and what good-liver would provide the one, when the other, much better, could be procured at half the expense? Crossed, however, in a small degree with the common dunghill fowl, they give increased size both to their egg and body, and may, in mild climates be of some value for that object.

THE POLAND.—A shining black in color, with a beautiful white tuft on its head; a medium size, a good layer, seldom sitting to hatch, rather tender to rear while a chicken, and more thinly feathered and not so hardy in cold and storms as the common hen. In a great part of the U. States it will thrive successfully, and lay as many eggs as any other fowl, perhaps more. Its flesh is good. On the whole, a handsome and a profitable fowl. There is a white variety, without a feather of any other color. These are very beautiful, but perhaps not quite so hardy as the black. There is, also, a splendid gold and black, or pheasant-colored variety. These are scarce in the U. States. I have seen several beautiful specimens imported from England, but was never able to obtain any for breeding. These colors are more propagated by the poultry fanciers than others, and are seldom to be had but of them.

The BANTAM is a beautiful little bird, usually white in color, with short legs, feathered oftentimes to the extremity of its toes. It is often of variegated colors, inclined to red, brown, and white, prettily mixed. Occasionally a variety is met with that are smooth legged. They are very domestic, often making their nest in the kitchen and cupboards of the dwelling, when permitted. They are excellent layers, and good nurses; but require a dry location, on account of their short, feathered legs. The males are wonderful crowsers, exceedingly pugnacious, and make three times the fuss about the poultry-yard that any thing, but a Bantam, should do. They arrive at maturity early, and are well worthy of propagation.

The BRUCKS COUNTY breed has received some celebrity in the neighborhood of Philadelphia, as a valuable variety of fowl, principally on account of its enormous size. I have seen many specimens of this fowl, paid some attention to its habits, and learned from those who have tried them, their principal merits. It is a large bird, weighing, at maturity, eight, and even ten pounds; rather thinly feathered, of various colors from grey to black, and frequently speckled black and white. They are coarse in their legs, tall, and bony, and have evidently a cross of the Malay in their composition. They are but moderate layers; their eggs very large and good. They are bad sitters, frequently breaking their eggs, on account of their great weight and size, by crushing them; are not hardy, and, on the whole, will not compare with the common dunghill fowl for ordinary uses. They do not breed *equally* in size and appearance, showing them evidently to be a cross from other breeds; but from what they are derived, other than the Malay, it is difficult to say. A gentleman of my acquaintance, who is very curious as well as nice in the selection of his fowls, tried them effectually for his poultry-yard, and they disappointed him. He then crossed them with the game breed, and has succeeded finely—the cross being reduced in size, fuller feathered, harder, and better layers, with an excellent carcass, and finer flesh. As a fancy fowl, or to make up a variety, they are very well; but can never become of great utility, except to cross with the common or the game fowl, to the farmer.

The JAVA or INDIAN fowl, is a large coarse bird, covered with a coarse long down or hair, of a dirty white or yellow color, and running from that into all the shades of brown, even to a smoky black. It appears to differ little from the Malay fowl, save in its crowing, and perhaps laying deeper colored eggs. Its general characteristics are the same. In the northern states it is hardly worth propagation, and, as a fancy bird, it certainly possesses neither beauty nor utility.

The DORKING is a fine large bird, weighing, when at maturity, five to eight pounds. They are large-bodied, and of better proportions, according to their size, than any breed that I have yet seen, their bodies being very long, full, and well-fleshed in the breast and other valuable parts. They are short legged, thickly feathered, with fine delicate heads, both double and single combs, and a shining, beautiful plumage. The color of their legs is white, or flesh-colored, having five instead of four toes, the fifth being apparently superfluous, and rising like a spur from the same root as the heel toe in the common varieties. This is a distinguishing mark of the variety. They are most excellent layers, good and steady sitters, and kind, careful nurses. Their color is various—from nearly white to almost black, many of them beautifully variegated. They are the capon fowl of England, and are bred in great quantities for the luxurious tables of the wealthy classes, in the counties about London. In America they are a scarce bird. I never saw one till the fall of 1841, when a friend, by

whom I sent, brought me out half-a-dozen from England; and although they were but chickens when they arrived, and, from their long confinement on the voyage, miserably poor and full of vermin, they rapidly improved, commenced laying during the winter, and have, thus far, exceeded any other fowls I ever kept, in their good qualities. Their young have proved very hardy and easy to rear. The males, of which I imported two, are large strong birds, and the hens are all I could desire of them. Their eggs are of large size, clear white, and excellent in quality. For capons, they no doubt exceed all other fowls whatever, often weighing, full grown, ten or twelve pounds. This variety I have determined to keep for my own purposes.

The only other distinct varieties from the above-named with which I am acquainted, are the common Dunghill fowl, which runs out into all the various ramifications of Creeper, Rumpless, Dominica, &c. &c., and are to be met with in every farm-yard of the country. Of their respective values, different opinions and fancies prevail. They are, doubtless, all good; and to those who are curious in their poultry, many beautiful, choice, and excellent birds may be selected from them for a choice poultry-yard. But to one who admires a *true breed* of fowls, none can be relied on but those of *distinct* characteristics, belonging exclusively to their one variety.

I might here enlarge, and go into the various methods of rearing fowls, and speak of their treatment, accommodations, &c.; but as this was not within my purpose when penning the above, I refer the reader to the various treatises on those subjects, or, what is better, to any good, experienced housewife, on almost any farm in his neighborhood. The rearing of chickens, and care of a poultry-yard, is not among the *abstruse* sciences.

L. F. A.

Black Rock, August, 1842.

For the American Agriculturist.

Uses of Charcoal as Manure.

GENT.—From an article on Dr. Liebig's Organic Chemistry applied to Agriculture, in the April number of the North American Review, it appears that the most valuable property of a soil, is that of absorbing and giving off those vapours and gases that constitute so considerable a portion of the food of plants. Reflecting on this fact, it occurred to me, that charcoal might prove a most valuable manure; from its well known capacity of absorbing vapours, gases and saline solutions, and under certain circumstances giving them out.

The ladies make use of charcoal in their flower-pots, from an experience of these results. At this time I did not know of its being used on a large scale. I communicated the idea to Mr. Phineas Sargent, and he remarked he did not know that it had been used as a manure; but that he had often observed the charcoal hearths were more productive than the surrounding land. I made further inquiries of Mr. A. B. Allen on the same point, and he had the kindness to furnish me Mr. J. H. Hepburn's valuable paper, "Charcoal as a Manure," published in the Trans. of the Ag. Soc. of N. Y. p. 298.

1842. I was not a little gratified to find my speculations sustained by so accurate an observer.

As Mr. H. declined to enter into the chemical character of charcoal, I propose to supply that portion of the subject compiled from such writers as are within my reach.

From Ure's Dictionary of Chemistry, article Gas, we extract: "Of all solid bodies, charcoal is the most remarkable in its action on the gases. In M. De Saussure's experiment, the red hot charcoal was plunged under mercury, and introduced after it had become cool into the gas to be absorbed without ever coming into contact with the atmospheric air.

"One volume of charcoal made from boxwood	
absorbed of ammonia, - - -	90 volumes.
Muriatic acid gas, - - - -	85 "
Sulphurous acid, - - - -	55 "
Sulphuretted hydrogen, - - -	55 "
Nitrous oxide, - - - -	40 "
Carbonic acid, - - - -	35 "
Olefiant, - - - -	35 "
Carbonic oxide, - - - -	9.42 "
Oxygen, - - - -	9.25 "
Nitrogen, - - - -	7.5 "
Gas from moist charcoal, -	5.0 "
Hydrogen, - - - -	1.75 "

"The absorption was not increased by allowing the charcoal to remain in contact with the gases after 24 hours, with the exception of oxygen, which goes on condensing for years in consequence of the slow formation and absorption of carbonic acid gas. If the charcoal be moistened, the absorption of all those gases that have not a strong affinity for water is diminished. Thus boxwood charcoal, cooled under mercury, and drenched in water, is capable of absorbing only 15 volumes of carbonic acid gas; although before being moistened, it could absorb 35 volumes of the same gas.

"Dry charcoal saturated with any gas, gives out, on immersion in water, a quantity corresponding to the diminution of its absorbing power. When a piece of charcoal which is saturated with either oxygen, hydrogen, nitrogen, or carbonic acid gas, is put into another gas, it allows a portion of the first to escape, in order to absorb into its pores a portion of the second gas."

Charcoal, when reduced to powder, will absorb but half the quantity of gas that it would when in the lump.

The advantage of this article over every other that has been used as a manure is, that what is not actually consumed or washed

away is retained on the soil, and will continue to absorb and give off the vapours, gases, and saline solutions for an unlimited period. It would therefore be an experiment worthy of trial by our western agriculturists, to make their wood into charcoal and spread it on the soil, rather than to reduce it to ashes, which at most will last but a few years.

Yours, &c.,

C. H. RAYMOND.

Buffalo, Aug. 6th, 1842.

A long letter we have recently received from Dr. Freeman, in which his success at renovation of worn-out lands, by keeping a stock of hogs, the feed for which he had to purchase at first, as his land was too poor to produce it, is detailed at length. His experiments with the catch breeds of the country, till he procured the improved stocks, are amusing, satirical and instructive to a high degree. He says,

With many it is enough to have hogs that will gormandise and grunt till they are tired of feeding, without regard to the quality of their meat, amount of hide, bone, and bristles. One neighbor told me lately, that his pork cost him 25 cents a pound, and he only kept them to please his wife, that she might make souse and sausages. One was brought to my place, not long since, which I could not but ridicule; it looked as if it could distance a greyhound, and I was told by its owner, that as he could not fatten it he had saved it to breed from!!!

The owner had better point his hog's nose for Symmesonia, and follow at the tail of his beast, us neither animal can be put to any profitable use in this region.

For the American Agriculturist.

Tallahassee, July 22d, 1842.

GENTS: I have become a subscriber to your paper, and therefore take the liberty to make a few inquiries.

What is the best mode of keeping the weevil out of corn?

I have heard it said by some, that if you put a female animal to a male on the increase of the moon, that she will certainly become pregnant; but if you put her on the decline of the moon that she is not so apt to become pregnant. Do you see any truth in this assertion? How in the world does the moon affect the animal, or does it affect it?

Yours respectfully,

A FLORIDIAN.

Reply.

The weevil has been effectually kept from corn by spreading a layer of wild myrtle, (*myrica cerifera*), at the bottom of the corn crib, and alternating it through the entire heap. Fresh slacked lime, plentifully spread

on the bottom and sides of the granary, will also prevent their ravages. Salt water sprinkled on the grain is said to have the same effect. It is kept from growing grain by sowing 3 or 4 bushels per acre while moist by rains or dews. Salt and lime, plaster of paris and saltpetre, are, as a general rule, useful for destroying grubs, worms, and insects; and if not in excess, never injure, but always promote the growth of plants. In France, undressed sheep skins, with the wool on unwashed, laid over and around the grain, have been found to attract and destroy the whole community of them. Locks of unwashed wool laid in drawers with woollen clothes, have been found in like manner effectual in destroying moths. Most of the herbs containing the essential oils and of pungent odor, have been found also, to drive away mice, insects, ants, &c., such as peppermint, spearmint, sage, &c. &c.

The Moon.—We think this vagrant, changeful, and not totally spotless vestal, has altogether too much notoriety either for her own reputation, or the good sense of her traducers. Time was, when she had the credit, from the notable husseys of Europe, and America too for that matter, and their better halves to boot, of all the ills that affected them, curdling their milk, uncurdling their cheese, preventing the butter from coming, spoiling the meat, now swelling it in the pot, and anon shrinking it, disordering the children, turning the heads of the young folks, and crazing the older ones; causing the domestic animals to cast their young, or stirring up strange and unnatural appetites in them; blasting the seed of the farmer, or withholding the expected crop; in short she was the chosen and prolific home, whence issued all the hobgoblins, witches, and sprites that afflicted fallen humanity. On the other hand, the poets and sentimentalists apothecised her, as the fruitful mother, not only of all the chaster virtues, but as the harbinger of all good fortunes, and the bestower of benefits unnumbered to the human race.

It can hardly be said, as in most other extreme views, that truth lies between, as we conceive it lies nowhere in this controversy. The fair damsel is one of the sources of light to us, and for her mild, benignant rays, and at all times pleasant, varying phase, we bless her gentle presence. She is the favored recipient of many a poet's lay, and her silver bows are hung with the garlands, woven by the love-lorn lass, or her devoted innamorata; and she is always the kindly mirror to receive and reflect at the genial hour, the cherished forms of those we love in distant lands.

But divested of all sentiment, and taking the philosophical view of the matter, we are obliged candidly to confess, she has but little to do with nature's operations, who always deals with matters of fact alone. The moon, by her proximity and weight alone, acting in accordance with the general laws of matter, attracts and is attracted by our earth. The solid matter, from its adhesiveness, she moves not, nor stirs perceptibly the water in our inland seas and lakes. But on the vast body of the ocean and the atmosphere, she acts to a great extent, producing liquid and aerial tides. These have various influences on such animal and vegetable life, as are directly connected with them, and are fruitful of other phenomena. But with these, the plain farmer has little to do; and we may safely say to him, that in all his operations of sowing and harvests, and the multifarious operations of his farm, he will most effectually consult his own interests, and subserve the principles of common sense, by not consulting an old wife's fable, or old crone's legend, in connection with the moon. Impregnation is most effectually secured, by deferring the connexion till the animal is going out of heat

Preservation of Health.

The following judicious cautions as to the preservation of that invaluable blessing, health, by one every way competent to offer them, we cannot too earnestly commend to the careful attention of our readers. We anticipate with great pleasure, a series of articles on this and similar subjects, affecting human comfort and health, from the same pen.

For the American Agriculturist.

GENT: Probably in no portion of the community do we observe a greater degree of thoughtlessness and prodigality on the score of *health*, than among that portion known as the *laboring class*. To no portion is health of so much consequence as this—for with them it is not alone a matter which concerns its immediate blessings, such as personal enjoyment, longevity and capability of usefulness; but it is a matter which affects directly and intimately their means of subsistence. Health is (so to speak) their stock in trade: and the effect of any thing which deteriorates it, tends, just so far as it diminishes their strength and power of endurance, to diminish the productiveness of the "capital" which nature assigned to them.

This is a subject which it is of immense importance should be more generally considered, and correct principles diffused among those who have not leisure, opportunity, and too often self-consideration enough to prosecute inquiries and investigations for themselves. Not to occupy a disproportionate share of your valuable space, I shall restrict myself to a few suggestions, wholly of a practical character, which, I hope, may serve, at least, to excite reflection among those more especially interested.

As laborers are in a great measure without the influence of those causes of disease which arise from luxury, idleness, and the unrestrained cultivation and indulgence of the passions, by far the greater number of the diseases from which they suffer arise from two sources, viz: atmospheric vicissitudes and malaria. Putting aside the operation of the use of the alcoholic poison, nearly all their ailments may be attributed to these two sources. The observance of a few judicious regulations of clothing, and habits of carefulness, with regard to exposure, would, doubtless, do much towards their protection from these morbid agencies.

Laborers are altogether too indifferent on the subject of dress. In cold latitudes in the winter season, the body of the working man, fully as much as that of any other individual, should be warmly clothed. They might know this if they would interpret aright the intimations of nature in her provisions for the health and comfort of animals. If simplicity of diet and physical exercise, had been enough, nature, who is ever economical, would not have invested animals with fur, wool, or feathers. This hint from nature might also lead to the proper choice of the substances from which clothing for the use of man is to be manufactured. It is not thickness, closeness of texture, or strength, which are the most useful properties. It is the non-conducting quality. The body furnishes its own supplies of caloric, and the duty of art should be to prevent its too great radiation from the body by interposing substances which do not easily permit of its transmission. Different substances differ very much in this respect; and we find that those which are instituted by nature for precisely this object, possess this property in the most eminent degree.

This explains the advantages of enveloping the body with *flannel*, the virtue of which resides chiefly in its non-conducting property; and which need not always be thick and heavy in its texture to secure, measurably, its value as a protective against atmospheric vicissitudes.

Silk is also an animal production possessing the same merit. Woven, raw silk may be classed next to flannel in its non-conducting power; and possesses the advantage of being less heavy and cumbersome. It may be used as a substitute, when flannel, from some peculiarity of constitution, is found to be irritating and uncomfortable. Should silk become one of the staples of our country, its use as an article of dress worn next the skin would not be the least of the advantages to be derived from its cultivation. At present it is too expensive for common use.

A vast amount of disease would be prevented if the laboring classes appreciated better the importance of flannel or silk as an article of dress. This fact does not rest wholly upon theory. It is well ascertained, that since the use of flannel shirts have been prescribed by the navy regulations of Britain and the United States, and generally adopted by sailors, the diseases of this class of laborers have very greatly diminished; and, certainly, as a class, they are more exposed to the influence of atmospheric vicissitudes than any other.

In many localities in temperate climates, it would be advisable to continue its use throughout the year; and wherever changes are sudden and great, this is especially important. Where the temperature is uniform, and variations gradually succeeding each other, it is less so.

The following principles in connection with this subject ought to be borne in mind:—

1. The liability to imbibe disease from this source is much increased when the body is much heated, perspiration abundant, and the powers of the system exhausted by previous labor or other causes. The laborer should always have means of protection at hand to meet these circumstances. He should be careful never to allow the perspiration to evaporate rapidly under the influence of a current of air. Upon ceasing labor, he should put on an additional garment, instead of divesting himself of those which he has on already. He should avoid lying upon the damp ground, &c. He should especially be careful of exposure at night, when the temperature of the surrounding medium is much diminished, and the susceptibility of the body greatly increased by the exhaustion consequent upon the labor of the day.

2. Another principle equally important is, that the effect of changes of external temperature upon the economy is greater, the greater the degree of heat to which the body has for some time previously been exposed. Thus, other things being equal, a lesser degree of atmospheric depression, will occasion a greater liability to disease in a warm climate, than a greater degree in a cold latitude. This indicates the importance of clothing the body in a non-conductor in hot climates—to which silk is admirably adapted. I believe much disease would be avoided by properly appreciating this principle.

A great deal might be said upon this branch of the subject, but I pass, to make a few remarks upon malaria.

What the nature of that agent is which emanates from certain marshy localities in new countries, we do not know. It is something which eludes the senses, and therefore, scientific analysis. But we know that its effect in producing diseases, depends, in addition to its own proper action, very much upon an aptitude in individuals to become affected by it. In this latter point of view much may be accomplished in the way of prevention by artificial means. Its operation is also promoted by some external circumstances which may be ascertained to some extent, and our habits determined in conformity to them.

My remarks, owing to my limited space, must be very brief. Generally, it is to be remarked, by main-

taining the vigor of the body by the strict observance of all those conditions under which health in every situation is vouchsafed, we can do much toward protection from malarious influences. Temperance, proper protection from atmospheric vicissitudes, regularity, simplicity and uniformity in habits of life, regulated passions, &c.; all furnish us with much, if not entire security against so great an evil. It should also be recollected that the moisture of the atmosphere is the vehicle in which the morbid influence is contained and diffused, and hence, by avoiding exposure at night, early in the morning, and at certain periods of weather, the liability to disease is much lessened.

In connection with this topic I would add a consideration for the benefit of those who unfortunately suffer from malarious diseases. Providence has kindly furnished a specific for many forms of these diseases. It is the bitter principle which resides in the Peruvian and other barks, and which when extracted by chemical principles, and presented in a more concentrated form, is called *Quinia* or *Quinine*.

An impression very generally prevails that this is a remedy involving peculiar hazard, and that a variety of evils are apt to result from its use. This impression has originated with unprincipled nostrum-dealers, who wish to supplant a known remedy by their secret compounds, most of which owe all the virtue they possess, to the very article which they attempt to discredit.

The discovery of the febrifuge property of the barks was one of the most important ever made. It is calculated to prevent a vast amount of suffering and loss of life; and seems, in connection with the great exposure necessarily involved in the redemption of our national domains, to have been a specific dispensation of Divine benevolence for the benefit of the human race. That injury may arise from its injudicious application, must of course be admitted of this, as of all other remedies; but that its judicious administration is hazardous, as very many may be led to believe, is an error of great moment, and one which has been diligently fostered by a class of men whose motives are to speculate upon the credulity of mankind, and satisfy their mercenary cravings at the expense of their fellow beings.

I have already encroached too much upon your columns, and will therefore defer other considerations for another number.

AUSTIN FLINT, M. D.

Buffalo, July, 1842.

Mr. Edward W. Brewster, of Illinois, in a letter full of kind feeling and complimentary remarks, gives a brief account of this season's crops, which we subjoin. We have seen something of those immense agricultural and mineral resources which lie on the west side of Lake Michigan; and since our first acquaintance with the favored region lying between that lake and the Mississippi, we have thought, from its peculiarly varied and abundant advantages; its healthful climate; numerous streams, furnishing illimitable water power; its facilities for commerce, having, by the aid of the lake on one side and the "father of rivers" on the other, the choice of two markets; but especially from the high character for intelligence and moral worth of its inhabitants, it is destined soon to contain as dense, populous, and intelligent a community as is to be found west of the Hudson.

"Our harvest is nearly finished. The crop of wheat in Northern Illinois is a very heavy one. We shall send you a perfect avalanche of bread stuffs this fall. Our cool season has retarded the growth of corn. Oats and

barley are very fine. Grass is nothing thought of with us. Millions of acres of the finest pasturage and hay are annually given to the flames. Our sheep are, however, gradually extinguishing those fires. You shall in a few years see our wool in your markets, and have the hum of the manufacturer on the banks of the Fox and the Rock rivers."

Mr. R. S. Hardwick, of Georgia, writes:—"Our crops are finer in Georgia than I have known them for several years. We have a flourishing Planters' Club in this county, and it has already done much for the improvement of agriculture and stock; but much more needs to be done. I have exerted myself very much to get my brother farmers to read agricultural works, and have succeeded with about fifty persons; which, perhaps, is the greatest good I have done, except the introduction of Berkshire hogs and Durham cattle." We shall be glad of his communication on the facts to which he alludes.

LADIES' DEPARTMENT.

For the American Agriculturist.

GENT.—It gave me pleasure to see the observations of Mr. Lewis on the utility and pleasure derivable from an occasional reference to the time-honored classics, which, as he justly hints, might well be substituted for the pernicious light reading which pours in upon us at every avenue, finding access to the quiet ingles of the country, as well as the luxurious apartments of the city. In looking over the late beautiful work of William Howitt on "the Rural Life of England," I have been interested in his corresponding notice of the truly great men of past days, who, with rarely an exception, were the lovers of the country and the cultivators of the soil. Permit me to quote a few passages, perhaps not irrelevant to your columns, which may be an acceptable *morceau* to some who cannot obtain the work itself.

"Of Cicero, Seneca, the Plinys, I will say nothing. We all know how they delighted in their country villas and gardens. We all know how Cicero, in his *Treatise on Old Age*, has declared his fondness for farming, and how, between his pleadings in the Forum, he used to seek the refreshment of a walk in a grove of plane-trees. We know how, during the best ages of the commonwealth, their generals and dictators were brought from the plough and their country retreats—a fine feature in the Roman character, and one which may in part account for their so long retaining the simplicity of their tastes and that high tone of virtue which generally accompanies a daily intercourse with the Spirit of nature. All this we know; but what is still more remarkable is, that Horace and Virgil, two of the most courtly poets that ever existed, were both passionately fond of the country, and perpetually declared, in their writings, that there is nothing in the splendor and fascinations of city life to compare with the serene felicity of a rural one. Horace is perpetually rejoicing over his Sabine farm; and Virgil has, in his *Georgics*, described all the rural economy of the age, with a gusto that is felt in every line. His details fill us with admiration at the great resemblance of the science of these matters at that time and at this. With scarcely an exception, in all modes of rural management, in all kinds of farming stock, sheep, cattle, and horses, he would be now pronounced a consummate judge; and his rules for the culture of fields and gardens, would serve for study here, notwithstanding the difference of the Italian and English climates." Yet, as Howitt goes on to

remrak, these stern warriors and smooth-spoken bands of ancient story, were but feebly impressed with that all-pervading enthusiasm, for the wonders and beauties of divine workmanship now so generally manifested in all classes of society, which breathes in the hallowed strains of the poet's lyre, and enters deeply into the spirit of our journals and periodicals of ephemeral literature—into our books of travel and works of theology and metaphysics—and which is seen in the whole character of society and its institutions. The love of the country and its rural occupations has been for centuries a growing passion, and with what truth does Howitt ascribe to Christianity this change, so obvious to all reflecting minds! The soliloquy which follows this just ascription is not among the least glowing and beautiful pages of this sweet, popular poet and pastoral writer. But let us extract a passage or two from what he says on a subject which more than all others touches the liveliest chord in the Christian's breast. "Yes! the only difference between modern literature and that of the ancients, lies in our general advantage over them in this particular. It is from the literature of the Bible, and the heirship of immortality laid open in it, that we owe our enlarged conceptions of natural beauty, and our quickened affections towards the handiworks of God." "The veil which was rent asunder in the hour that its Divine Founder consummated his mission, was plucked away, not only from the heart of man, not only from the immortality of his being, but from the face of nature. A mystery and a doubt, which had hung athwart the sky like a vast and gloomy cloud, was withdrawn, and man beheld creation as the assured work of God—saw a parental hand guiding, sustaining, and embellishing it, and immediately felt himself brought into a kinship with it, and into an everlasting sympathy with all that was beautiful around him; not simply for the beauty itself, but because it was the work of the one Great Father—the one Great Fountain of all life and blessing." We could multiply extracts, but we would rather refer your readers to the work itself; and allow us to add, we earnestly hope to welcome Howitt and his congenial and accomplished "Mary," one day, to our wonderful country, so fraught with deep and intense interest to spirits like theirs, which the world's chilling influence has so little affected; but we would greet them by the hearth-stones of our quiet homes, and at our family trysts, where the flame of friendship burns purest and brightest—and not in our ball-rooms and theatres, these great charnel houses of all true sentiment and feeling; and not until our transatlantic friends so meet us, as on common ground, shall the true genius of our country and the effect of our republican institutions be either understood or appreciated. ELLA.

To pickle Cucumbers.—Select a sufficient quantity of the size you prefer, which, probably, cannot be done at one time. Put them in a stone pot, and pour over them a strong brine; to this add a small bit of alum, to secure the color. Let them stand a week; then exchange the brine for clear water, in which they must remain two or three days. Boil the best cider vinegar, and, when nearly cool, pour it over the cucumbers, having previously turned off the water. Prepared in this manner, with the addition of cloves, allspice, mustard, and cinnamon, boiled in the vinegar, pickles of every kind will keep for a year. In pickling cauliflower, tomatoes, and other vegetables which easily absorb the vinegar, the spiced vinegar should be added when cold.

Sure method of putting out the Fire of Chimneys.—The simplest method is to have always in the house a certain quantity of flour of sulphur, and, in case of catching in the flue, take a handful of it, which throw

in the fire in the hearth, then stop the fire-place with a wet sheet or blanket. In a few seconds the fire will be entirely out.—*Franklin Farmer.*

If you wish to have a supply of *horse-radish* all winter, have a quantity grated while the root is in perfection, put it in bottles, fill them with vinegar, and keep them corked tight.

Inflamed Eyes.—Pour boiling water on some alder flowers, and steep them like tea. When cold, put three or four drops of laudanum into a small glass of the liquid, and apply the liquid to the eyes three or four times a day; which persevered in, they will become perfectly strong in the course of a week.

When making *Candles*, steep the wicks in lime water and saltpetre, and dry them. The flame will be clear, and the tallow will not "run."

Gapes in Chickens.—Take as much soft soap as will cover the thumb-nail, and mix it with meal dough. Give it to the chicks at any stage of the disease. If this fails on the first application, it rarely does on the second.

Woolens should be washed in very hot suds, and not rinsed. Lukewarm water shrinks them.

SELECTIONS.

RAISING CORN FOR THE MANUFACTURE OF SUGAR.—
By Wm. Webb, of Wilmington, Del.

Use for seed the largest and best ears of any variety of corn not disposed to throw up suckers, or spread out in branches; that kind most productive in the neighborhood, will be generally the best one adapted to the purpose. The planting should be done with a drilling machine. One man with a pair of horses, and an instrument of this kind, will plant and cover, in the most perfect manner, from ten to twelve acres in a day. The rows (if practicable, let them run north and south) two and a half feet apart, and the seed dropped sufficiently thick in the row to insure a plant every two or three inches.

A large harrow made with teeth arranged so as not to injure the corn, may be used to advantage soon after it is up. The after culture is performed with a cultivator, and here will be perceived one of the great advantages of drilling; the plants all growing in lines, perfectly regular and straight with each other, the horse-hoe stirs the earth and cuts up the weeds close by every one, so that no hand-hoeing will be required in any part of the cultivation.

"It is a part of the system of cane planting in Louisiana, to raise as full a stand of cane upon the ground as possible; experience having proved that the most sugar is obtained from the land in this way." As far as my experience has gone, the same thing is true of corn. This point must therefore be attended to, and the deficiencies, if any occur, made up by timely re-planting.

The next operation is taking off the ears. Many stalks will not produce any, but wherever they appear, they must be removed. It is not best to undertake the work too early; as when the ears first appear, they are tender, and cannot be taken off without breaking, which increases the trouble. Any time before the formation of grain upon them, will be soon enough.

Nothing farther is necessary to be done until the crop is ready to cut for grinding. In our latitude, (39° 43' N.) the cutting may commence, with the earlier varieties, about the middle of August. The later kinds will be ripe in September, and continue in season until cut off by frost. The stalks should be topped and bladed while standing in the field. They are then cut, tied in bundles, and taken to the mill. The tops and blades, when properly cured, make excellent fodder,

rather better, it is believed, than any hitherto used; and the residuum, after passing the rollers, may easily be dried and used in the same way; another advantage over the cane, which, after the juice is expressed, is usually burned.

The mills should be made on the same general principle employed in constructing those intended for grinding cane. An important difference, however, will be found both in the original cost, and in the expense of working them. Judging from the comparative hardness of cane and corn stalk, it is believed that one-fourth part of the strength necessary in the construction of a cane mill, will be amply sufficient for corn; and less than one-fourth part of the power will move it with the same velocity. It may be made with three upright wooden rollers, from twenty to forty inches in length, turned so as to run true, and fitted into a strong frame work, consisting of two horizontal pieces sustained by uprights. These pieces are mortised to admit wedges on each side the pivots of the two outside rollers, by which their distances from the middle one may be regulated. The power is applied to the middle roller, and the others are moved from it by means of cogs. In grinding, the stalks pass through on the right side of the middle cylinder, and come in contact with a piece of frame work called the dumb returner, which directs them backwards so that they pass through the rollers again on the opposite side of the middle one. The modern improved machine is made entirely of iron; three horizontal rollers arranged in a triangular form, one above and two below, the cane or stalk passes directly through, receiving two pressures before it escapes. The lower cylinders are contained in a small cistern which receives the juice. The latter machine is the most complete, the former the least expensive. These mills may be moved by cattle, but for large operations, steam or water power is preferable. When the vertical cylinders are turned by cattle, the axis of the middle one has long levers fixed across it, extending from ten to fifteen feet from the centre. To render the arms firm, the axis of this roller is carried up to a considerable height, and oblique braces of wood by which the oxen or horses draw, are extended from the top of the vertical axis, to the extremities of each of the arms. When horizontal cylinders are propelled by animal power, the upper roller is turned by cogs at one end, which are caught by cogs on a vertical shaft. It is said that in the West Indies, the purest cane juice will ferment in twenty minutes after it enters the receiver. Corn juice has been kept for one hour before boiling, without any apparent injury resulting; but so much delay is not desirable, as it may be attended with bad effects.

The process which has been employed in the manufacture of Maize sugar, is as follows: The juice, after coming from the mill, stood for a short time to deposite some of its coarser impurities; it was then poured off, and passed through a flannel strainer, in order to get rid of such matters as could be separated in this way. Lime water, called milk of lime, was then added in the proportion of one or two table spoon's full to the gallon. It is said by sugar manufacturers, that knowledge on this point can only be acquired by experience; but I have never failed in making sugar from employing too much or too little of the lime. A certain portion of this substance, however, is undoubtedly necessary, and more or less than this will be injurious; but no precise directions can be given about it. The juice was then placed over the fire, and brought nearly to the boiling point, when it was carefully skimmed, taking care to complete this operation before ebullition commenced. It was then boiled down rapidly, removing the scum as it rose. The juice was examined

from time to time, and if there was an appearance of feculent particles which would not rise to the surface, it was again passed through a flannel strainer. In judging when the syrup was sufficiently boiled, a portion was taken between the thumb and finger, and if when moderately cool, a thread half an inch long could be drawn, it was considered to be done, and was poured into broad shallow vessels to crystalize. In some cases crystallization commenced in twelve hours; in others, not till after several days; and in no case was this process so far completed as to allow the sugar to be drained in less than three weeks from the time of boiling. The reason why so great a length of time was required, I have not yet been able to discover. There is no doubt but that an improved process of manufacture will cause it to granulate as quickly as any other.

In a manual on the subject of cane sugar, prepared a few years since, in compliance with a resolution of the House of Representatives, some improvements were suggested on the usual mode of operation, which appear equally applicable to the corn. They are at least worthy of trial. The author remarks that "Defecation is the great problem of sugar making, and that it is one of no easy solution is proved by the unsatisfactory experience of centuries. We shall venture to advance a plan relative to this subject, which is in some respects new, and is founded on the view we have taken of the chemical composition of cane liquor. The cane juice, after having been suffered, by standing, to deposit its coarser impurities, should be drawn off to a rectangular vat, having a double bottom, and whose depth is equal to its diameter; in this vessel it must be subjected to a temperature of 208 to 210° F. From this vessel, after a repose of about forty-five minutes, its clear contents are to be drawn, by an orifice placed one inch above the bottom, into a vat of similar construction, whose top is situated four inches above the bottom of the first—taking the precaution to pass the liquor, in its passage from one vat to the other, through a filter of coarse cotton bagging. What remains in the vat is then to be drawn off through an orifice, on a line with the bottom, and suffered to settle in casks, the clear portion being added eventually to the second vat. The filtered liquor, in the second receiver, is now treated with milk of lime, formed by adding perfectly impalpable slacked lime to water, in the proportion of not less than four cubic inches to a gallon, the steam being let in previous to the addition of the lime. The quantity of temper is to be regulated as follows: after the additions of temper, portions of the liquor are examined, from time to time, by passing it through a fine cloth filter, and adding to it, in a wine glass, a teaspoon full of clear lime water; so long as a cloudiness appears in the liquor, on the application of this test, more milk of lime must be added. The heat must be carried to 210° F., when the steam must be cut off, and, after a repose like that above described, it is run off by means of an orifice, one inch above the bottom, until it begins to appear cloudy, when this orifice is closed, and another, situated on a level with the bottom, is opened, and the remainder is run off into a tub or barrel to settle for future decantation. The defecated liquor is made to traverse a bagging filter, as before, on its way to a general reservoir near the grande, and which should be capable of holding one thousand gallons. Sulphuric acid, diluted with twenty times its weight of water, or tartaric acid, dissolved in ten times its weight of water, is added, from time to time, to this reservoir, in quantities sufficient to maintain its contents, as nearly as possible, in a state of neutralization, or in such a condition that there will be no alkaline

reaction on paper stained with yellow by a strong decoction of turmeric.

The reasons for the foregoing plan are the following. Heat alone is sufficient for the separation of the albumen, and a large portion of the green fecula. The first heating, therefore, coagulates the albumen completely, the greater part of which will rise to the surface in a scum, more or less tenacious, bringing along with it a part of the precipitated fecula; while another portion of these impurities then falls to the bottom, along with insoluble earthy matters, pieces of cane, &c. And on being transferred to the second vat, the quantity of lime required for rendering insoluble the balance of the coloring matter in the juice, is greatly reduced, while its mischievous influence in rendering albumen soluble is avoided, since the principal part is already removed. The filters collect those flocculi which had escaped the process of subsidence; and the addition of sulphuric acid, or of tartaric acid, removes from the defecated liquor all excess of lime which it may contain, and the insoluble precipitate of sulphate of lime besides on the bottom of the general reservoir, without going forward to injure the kettles by the formation of a thick crust.

It will be at once apparent, wherein the present method of defecation has advantages over that where steam vats are employed, since by that plan a large portion of the albumen was rendered permanently soluble by the lime employed for throwing down the green fecula; and besides, no measures were taken for getting rid of the superfluous alkali remaining in solution, after the defecation was completed—the alkali being left to enter into union with the sugar, and by its subsequent action upon it in the kettles, to convert it into gum."

(Remainder in next number.)

CHEAP ROOFS.—The simple mode of roofing out-houses by nailing thin boards on light rafters may be introduced to very great advantage, particularly in the country. It is only to subject the boards, before using, to the action of fire, by way of thoroughly seasoning them. Nail them on immediately, and cover them with sheathing paper and a dressing of tar; and a covering, almost for a lifetime, may safely be calculated upon. The rafters, three inches deep, one and a half thick; the boards half an inch thick, straightened on the edges and closely nailed.

The following composition for covering such a roof was employed at Wickham twenty years ago, and is at this present time as good as when first laid. The roof is nearly flat, having a run of one inch only to the foot, the boards being securely nailed and covered with a course of sheathing paper, such as is used under the copper-sheathing of ships, made fast by small flat-headed nails. To eight gallons of common tar, add two gallons of Roman cement, five pounds of resin, and three pounds of tallow; boil and well stir the ingredients, so as thoroughly to incorporate them, and lay on the roof while hot, with a brush, spreading it very evenly; then sprinkle it while hot with sharp sifted sand, and when cold, tar and sand as before; after which, a single coat of tar once in five or six years will preserve the roof for an age.

To the above may be added, an incombustible impenetrable wash, prepared according to the following directions. Slake stone lime with hot water in a tub, covering it to keep in the steam; pass six quarts of it through a sieve, it being in the state of fine dry powder, and add to it one quart of fine salt and two gallons of water, boiling and skimming it. To every five gallons of this boiled mixture, add one pound of alum,

half a pound of copperas; and by slow degrees half a pound of potash and four quarts of fine sharp sand. The mixture will now admit of any coloring matter that might be preferred, and is to be applied with a brush. It looks better than paint, and is as durable as stone. It will stop leaks in the roof, prevent the moss from growing and injuring the wood, rendering it incombustible, and, when laid upon brick-work, causing it to become impenetrable to rain or moisture.—*Farmers' Cabinet.*

BEES.—But few persons are aware how early in the season bees eat honey faster than they procure it. By not attending to this in due time, learning from experiments, observation, or the experiments of others, much is lost. When the weather is dry, bees usually consume honey faster than they collect it after the middle or 20th of July, unless they have access to buckwheat, or other suitable flowers cultivated for their use; in this case, they may gain honey in September.

We have learned the above facts from exact experiments, having weighed hives every week through the season. In a severe drought we have known bees to starve in the latter part of July, and those hives that had honey would lose as much in weight per week, as in the cold weather in winter. In common seasons, bees seldom gain any thing after the 1st of August, without the advantage for pasturage named above.

This subject is important to bee masters who follow the old system, and destroy the bees when they take the honey. Some let them remain till the latter part of September, eating honey two months after they have ceased to collect any of consequence. In our short seasons for collecting honey, and long ones for consuming it, the habits of the bees must be studied very attentively, and there must be the most useful and economical management in order to make them profitable.

TO DESTROY THE BEE MILLER.—To a pint of water sweetened with honey or sugar, add half a gill of vinegar, and set it in an open vessel on the top, or by the side of the hive. When the miller comes in the night, he will fly into the mixture and be drowned.—*Boston Far. Jour.*

TO PROTECT SHEEP FROM THE GAD FLY.—In August and September this fly lays its eggs in the nostrils of sheep, where they are hatched, and the worms crawl into the head, and frequently they eat through to the brain. In this way many sheep are destroyed. As a protection, smirch their noses with tar. Lay some tar in a trough or on a board, and strew fine salt on it: the sheep will finish the operation. The tar will protect them, and what they eat will promote their health.—*Id.*

COMPOST—A SUBSTITUTE FOR SOAPBOILERS SPENT LEY.—Take of fine, dry, snuffly peat 50 lbs.; salt, $\frac{1}{2}$ bushel; ashes, 1 bushel; water, 100 gallons. Mix the ashes and peat well together, sprinkling with water to moisten a little; let the heap lay for a week. Dissolve the salt in the water, in a hoghead, and add to the brine the mixture of peat and ashes, stirring well the while. Let it be stirred occasionally for a week, and it will be fit for use. Apply as spent ley, grounds and all. Both ashes and salt may be doubled and trebled with advantage, if convenient. The mixture must be used before it begins to putrefy; this occurs in three weeks. It then evolves sulphuretted hydrogen gas, or the smell of gas of rotten eggs; this arises from the decomposition of the sulphates in the water and ashes, by the vegetable matter. A portion of geine is thus deposited from the solution.—*Dana.*

SALT, LIME, AND PEAT.—Take one bushel of salt, one cask of lime. Slack the lime with the brine made

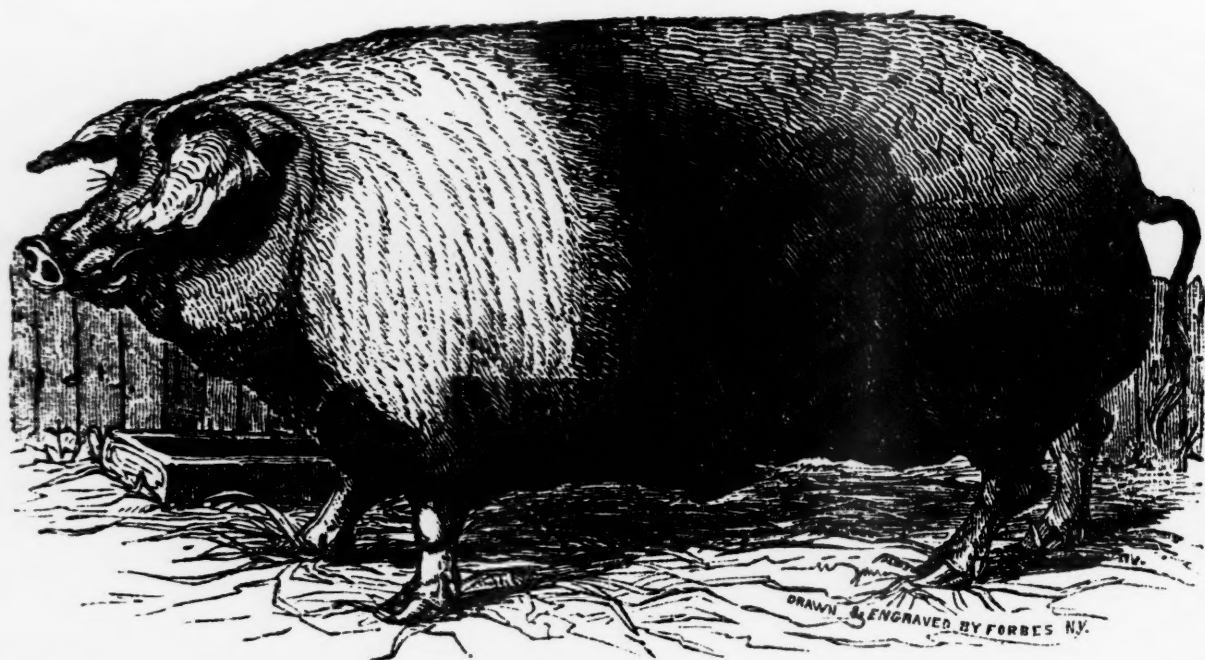
by dissolving the salt in water sufficient to make a stiff paste with the lime, which will not be quite sufficient to dissolve all the salt. Mix all the materials then well together in a heap for ten days, and then be well mixed with three cords of peat; shovel well over for about six weeks, and it will be fit for use. Here, then, are produced three cords of manure, for about the cost of \$2 10 per cord:—Salt, \$0 60; lime, \$1 20; peat, \$4 50—\$6 30.—3) \$6 30 (\$2 10.—*Id.*

ANIMAL MATTER AND PEAT.—There are some sources of alkali, for converting peat into soluble matter. Of these the chief is animal matter. Here we have ammonnia produced. It has been actually proved, by experiment, that a dead horse can convert twenty tons (or cubic yards) of peat into a valuable manure, richer and more lasting than stable dung;—"a barrel of alewives is equal to a load of peat." The next great and prolific source of ammonia is urine. The urine of one cow for a winter, mixed up as it is daily collected with peat, is sufficient to manure half an acre of land with twenty loads of manure of the best quality, while her solid evacuations and litter, for the same period, affords only seventeen loads, whose value is only about one half that of the former.—*Id.*

COOKING COTTON SEED.—I have a large kettle, which holds from 5 to 6 bushels, set upon a brick furnace, (which is less than one day's work for a mason to make.) I fill my kettle with cotton-seed fresh from the gin, and then fill up the kettle with water, and boil something less than half an hour; then empty the seed into troughs, and let my cattle and hogs to them. The milk and butter has none of that cotton-seed taste which the green or uncooked seed gives. Both cattle and hogs will keep in good order, winter and summer, on seed thus prepared; and when you are ready to fatten pork, you have only to add an equal quantity of cotton seed and corn, and boil as above. Experience has proved to me that it will fatten sooner and be equally good as when fattened on corn alone. Your cows will give an abundance of milk all winter, when fed in this manner, with but one bushel of corn to four of cotton seed. Every one is aware of the advantage of boiling turnips, turnip greens and cabbage for the human stomach. The boiling of cotton seed is not less advantageous as food for stock. Besides, there is great economy in feeding seed thus prepared. By the usual method in feeding, there are more than double the quantity of seed wasted than are consumed by the stock.—*S. W. Plant.*

NEW KIND OF HEMP.—We have received from the editor of the Attakapas Gazette a sample of the hemp yielded by the okra plant, which our curious readers are invited to examine. The Gazette remarks: "We published last week an article from the Opelousas Gazette, stating that the okra bark contained a kind of hemp which might be employed to advantage by our cotton-planters, in making their own rope and cotton bagging. We have since received a sample of this new article, and were really astonished at its resemblance with genuine hemp, both as to color and strength. We have not the least doubt that it would fully answer the purpose just stated, if manufactured by persons understanding the business."—*New Orleans Bulletin.*

CURE FOR GRUBS IN HORSES.—Add a pint of strong vinegar to a cubic inch of chalk; when the effervescence ceases, drench the horse with the liquid from a bottle.—*So. Plant.*



The above cut represents a WOBURN BOAR, owned by Mr. Charles Starr, Jr., of Mendham, New Jersey. His description and the breed to which he belongs, was received too late for insertion, and will appear in our next. We believe his stock are traced to the original breed of England. Mr. S. adds, his price for pigs delivered in cages in New York, is \$25 per pair for Woburn's, 3 months old, and \$15 for crosses, on Berkshire's and China's. He has a few pairs of each now for sale.

NEW PUBLICATIONS.

LIEBIG'S ORGANIC CHEMISTRY APPLIED TO PHYSIOLOGY AND PATHOLOGY.—The suggestion, that *thought was a secretion of the brain*, is much in accordance with the popular style of physiological inquiries, of the past and present day. The investigations that have been made on this most important subject, have hitherto been conducted too much, as if their ingenious but visionary and misguided authors were probing the principles of matter alone. They have been vainly striving to seek out and define the *principle of life*, that hidden mystery, whose inscrutable essence, equally with that of its great Author, can be known only by Himself, and in their efforts, have only bewildered their own minds; like the alchemists in their idle pursuit of the principle of transmutation, or the geometricians, in their attempts at discovering the quadrature of the circle, or the mechanics, that of a perpetual motion, and the geographers, in their bootless efforts to reach the poles.

Liebig, like a truly great philosopher—the greatest of the present day he unquestionably is, on this and kindred subjects—very properly discards the chimerical hope of discovering the *principle of life*, and claims only for the legitimate objects of his philosophy, the discovery of the *laws of vitality*. With this object in view, he has gone forward and given to the world another volume, which, as we have not had time to peruse or further room to notice if we had, we must omit till our next. In the mean time we hope our readers will peruse it for themselves, and are sure they will thank us for thus promptly calling their attention to the work. It is for sale at Saxton & Miles, 205 Broadway.

ELEMENTS OF AGRICULTURAL CHEMISTRY AND GEOLOGY, by Jas. F. W. Johnston. We are certain we have but to indicate the subjects above treated by Professor Johnston, to insure for it an immediate perusal by the farming public. It is a condensation from his enlarged "Lectures" on the same subject, affording the principles and practice therein contained, without the theory and reasoning on which they are based; and is

suited to such as are less advanced in scientific agriculture than those for whom the larger work is intended. For sale at Saxton and Miles's, 205 Broadway.

URE'S DICTIONARY OF THE ARTS.—We have received the first 14 Nos. of this valuable work, republished by D. Appleton & Co., of this city. With many of the best scientific works of the present day, we are indebted to our transatlantic brethren for the original. This affords a full and comprehensive manual on the properties of most of the substances used by mechanics and manufacturers, and the principles and practice of their most successful application, brought down to the present moment. No man of science, in the practice of the fine or useful arts, should be without it.

FINAL REPORT ON THE GEOLOGY OF MASSACHUSETTS, by Ed. Hitchcock, L. L. D., of Amherst College. Northampton: J. H. Butler, 1841.—This is a splendid quarto of 2 volumes, containing about 1200 pages, with 50 or more pages of plates, in addition to numerous illustrations. The free-hearted donor of this most acceptable work, will accept our very sincere acknowledgments. The above work was executed in accordance with a law of the state of Massachusetts, authorising a geological survey of the state, and a report thereon, with an especial reference to its *Economical Geology*, by which is intended, the *nature of soils, their chemical composition and geological character, and means of improvement*, all of which are conspicuously treated in these volumes. By such well-timed liberality and discreet legislation, as induced the state to authorise its geological survey with particular reference to the development of its internal wealth, and especially by insisting that the report be accompanied with such scientific remarks and principles as to secure the future benefits of these discoveries, she has done much to promote the progress of future wealth and useful intelligence within her borders. These are monuments, which, like the Appian Way, will hereafter indicate to the remote and far distant future, that a generation here held sway in

the nineteenth century, worthy of their sires, and the country they inhabited. We need not add, for those who know him, that Prof. Hitchcock has executed this work in a manner that fully justifies the commission under which he acted.

BEEES, PIGEONS, RABBITS, AND THE CANARY BIRD, familiarly described; their habits, propensities and dispositions explained; mode of treatment, in health and disease, plainly laid down; and the whole adapted as a text-book for the young student. By Peter Boswell, of Greenlaw. With an appendix, for the care of several American singing birds. New York: Wiley & Putnam. —This is a reprint of a popular English Manual on the above subjects; and it is written with judgment, close attention to the habits of the pet domestics therein described, and with much plainness and good taste in the style adopted. We shall make some extracts for the *wee things*, in our Ladies' Department, which will fully illustrate the character of the work.

NEW AGRICULTURAL WORK.—The Hon. Adam Beatty proposes publishing a work on practical agriculture, including his premium essays, which have been revised and prepared for the press, with explanatory notes. The volume will contain about 300 pages, duodecimo, on good type and paper. Price, payable when the work is delivered, \$1.

From the long experience of Judge Beatty as a farmer of the West, and his high character as an agricultural writer, we have no doubt that the work he proposes publishing, will be found both valuable and interesting, and we most cordially recommend it to the public.

We have extracted the above notice from the Ky. Maysville Eagle, and we hail the determination of our highly esteemed friend, with unfeigned pleasure. We have had the satisfaction, and advantage too, of perusing the published and manuscript portions of this work, and are confident he cannot confer a greater boon on the inhabitants of the great western valley, than by its publication. Judge Beatty is a thoroughly practical, as well as scientific agriculturist; and his long experience, good judgment, and close and accurate observation, entitle his opinions on this subject to the fullest confidence.

The first No. of the **BERKSHIRE FARMER AND GARDENER'S MAGAZINE**, published at Pittsfield, Wm. Bacon, editor, has been sent us. Old Berkshire, that has long been a brilliant star in the galaxy of agricultural improvement, exhibiting in her annual fairs, which have continued for many years, as fine an array of product as any other in the country, is waking up to the necessity of enlisting the press in her behalf. The paper is well filled with judicious matter, and is likely to afford an important aid in developing her agricultural resources.

We notice a long editorial article of our own, straying *uncredited* through its columns; the editor must jog the attention of the printer.

THE SOUTHERN PLANTER of Richmond, Va., we are glad to notice, has an accession to its editorial department in that devoted friend to agriculture, L. M. Burfoot, Esq., which we are sure will give increased interest to that useful and popular work. We find another Southern Planter among our exchanges, published at Natchez, Miss., and we would respectfully suggest, whether it would not be better, to avoid confusion, that another name be adopted for one of them. It is a

good title, and we don't wonder that our Southern friends are partial to it; but "a rose by another name will smell as sweet."

OLD AGRICULTURAL WORKS.—*Barnaby Googe, Esq.* —It is amusing, as well as instructive, to look over some of the old writers on husbandry, and observe the crude and uncertain ideas and principles that possessed them; how blindly they went forward in their career as instructors and guides, and how often, instead of teachers, they show the necessity of being taught themselves. The age of superstition had not then passed away: indeed, we may ask, is it yet entirely gone? *Aye*—gone from the high places, the academies and schools, from the minds of the learned and the wise, which it not unfrequently, most fully controlled within the last two centuries and a half. Demons and unseen spirits, hovered, in their bewildered imaginations, over the walks and destinies of man, guiding his footsteps for good, or balking them for evil; the air was filled with things strange and unnatural; a prophecy of peace and good fortune breathed in the gentle zephyr, and the direst ills that flesh is heir to, grated harshly on the ear, from the foreboding north or sullen eastern blast. Nature, to them, was a riddle, an unexplained, unfathomed mystery; and, like the red man for the first time perusing a book, or an Esquimaux the incomprehensible machinery of a watch, they laid hold of her in every direction, and viewed her under every aspect; but their comprehension of her subtle laws was more darkened by the investigation than ever. Bacon had not then arisen, an angel of light and life to the weary, misdirected and bewildered traveller, in his explorations of nature's hidden labyrinths; and no mind could, with authority, prescribe where the broad line of demarcation ran, that separated truth from error. They knew that somewhere in the widened defile it lay; but the shadowy and fitful gleams of their brightest reason played so uncertain over the broad expanse, that what at one time commended itself to their minds as the clearest light of truth, was, a moment after, by some intervening cloud, passed over to the opposite side of uncertainty or error. Bacon, that landmark in the march of time, where the world pauses to contemplate the magnitude of its own inheritance when first discovered,—Bacon it was who first established the immutable and impassable lines between what was known and certain, and what was yet to be proved and determined, in the visible and tangible things of nature's operations. He taught this first and most obvious principle of action, but which, like the egg of Columbus, the world had not till then known how to adjust, to take no premises for granted, from which the unchangeable and eternal principles of truth were yet to be educed. Every step in the advancement of science was to be taken on firm, unyielding, impregnable ground. Conjecture, and the hallowed legends of monkish superstition, or the more stately and gorgeous trappings of philosophic error, were, by his giant hand, brushed from our vision, to admit the unobstructed light of truth. Henceforth and for evermore, the distinctions between the false and the real, were to be as distinctly known as day from night; and, though in the imperceptible gradations from one to the other, there is necessarily a point where neither daylight ends nor darkness begins, for which a brief space is willingly conceded, as yet doubtful and undefined, we can yet confidently say of all the rest, it has a place fixed and certain as the sun in heaven.

It is not idly or vainly claimed for the present time, that all truth is known, that even more than a few rays of light are discerned in nature's vast expanse. But what we claim for the wiser of this present generation is,

that whatever they profess to know, they are absolutely certain is true; and what they assert to be false, cannot, by any efforts of sophistry, be made to assume a guise, other than that in which reason clothes it. We are not led on by the delusions of a fanciful philosophy, falsely so called, to waste our energies, our reason, and resources on things absurd and impracticable; but our course, in things natural, is as plainly marked and defined, as that in things spiritual, since the fullest developments of revelation. The road we are to travel is laid down with the distinctness of the milky way amid the starry host; the progress we make must depend on ourselves. If we are now blind, we are wilfully so; and if we grope in thick darkness, it is only because we prefer it to the light of day. It was the principle of Bacon, to evolve what was unknown by what was fixed and certain; to assume nothing, but to prove everything; to take no step in the dark, or on uncertain foundations; and whenever he could not advance with the certainty of holding his ground, to pause till further investigation gave him full assurance that he would not be forced to retrace his steps. To give these remarks a practical application, let us say, this is the mode every agriculturist ought to pursue in the whole course of his experiments and practice. His observation should always be awakened to what is going on around him, and nothing that can be noted should pass unobserved. From these observations should he deduce his facts; always carefully avoiding the classification of anything among the latter, but such as are beyond the possibility of overthrow or doubt. Whatever falls short of this, should remain as before, invariably ranked among the doubtful and unknown.

But we find we have occupied more space than we intended, and our illustrations from our old *black letter* friend, Barnaby Googe, Esquire, and his classic lucubrations of 400 pages, "printed at London, for John Wright, in 1578," must remain till a succeeding number.

The usual receipt of foreign monthly and quarterly journals have been received at this office, from which we shall extract hereafter.

EDITOR'S TABLE.

Directory for Fairs in 1842.

CHATAQUE Co. N. Y. at Westfield, Sept. 28 and 29.
BERKSHIRE Co. Mass. at Pittsfield, Oct. 5th and 6th.
HAMPSHIRE, FRANKLIN and HAMPDEN Ag'l. Show, Oct. 12th and 13th—Edward Dickinson, Pres't.; Harvey Kirkland, Sec'ry.

TENNESSEE Ag'l. Soc.—The Annual Meeting will be held at Nashville, Oct. 11—John Shelby, Pres't.; T. Fanning, Sec'ry.

ORANGE Co. N. Y. Fair at Goshen, Oct. 12th.

OURSELVES.—We trust we properly appreciate, and are sufficiently grateful, if we do not publicly acknowledge our indebtedness, for the many kind things said of our undertaking. We shall endeavor to render our quota of service to the farming community, by mixing the dulce with the utile, and strive so far as our feeble efforts may go, to give our farmers a taste for agricultural reading. We must beg the community, however, fully to understand, that a work of this extent cannot be carried on without means, and especially since there is measurably an end to the credit system of this country. If they wish it sustained; *they must not only subscribe themselves, but they must induce their friends to subscribe, and forward the cash for their subscriptions.* The excuse frequently offered for not taking a new agricultural paper is, that they take one already! Indeed? Take one paper? Then it is the height of audacity to suppose you should be persuaded to take another. But seriously, there is not a man in the United States who

cultivates five acres of land, but would make more money by taking and paying for three good agricultural papers, than by the same amount laid out in any manner whatever. The short-sighted, narrow-minded, unqualified meanness that people exhibit on this subject, is sickening. If a paper is unworthy support, let it be said so, point blank, and it settles the matter so far as their judgment is concerned; but for a person to allow that a paper may be "a good one enough," that's the phrase, and yet that 384 pages per annum of large page double columns, filled with the latest and best intelligence on the very subjects they derive their whole support from, is not worth *two cents per week*, and it is even less than this, is too absurd and drivelling an excuse to offer a rational person. It is highly probable no man who cultivates 50 acres of land, but would receive, by putting the information he receives from good agricultural works into practice, more than *one dollar per week* for what costs him less than *two cents*. The color of these remarks is perhaps a little tinged by an occasional circumstance like the following, reported to us:—One of our friends having an acquaintance who had just bought a \$30,000 farm for his son, and who expects to lay out half as much more before he completes his improvements, advised his taking our paper; but was repulsed with the cold calculation, that "it might not be just the thing he wanted, and he took a \$1 paper already."—However, he would consider the thing—and if on further reflection—he approved of the suggestion—he did not know—but he might be induced—to take the matter into a favorable consideration." Great condescension, immaculate prudence, well considered economy! He has saved his dollar thus far, but there are ten chances to one he is losing more than his dollar every day he lives, by omitting the adoption of some improvements he would meet with, beyond the line of his reading. We can point out to any novice in farming, who has invested \$30,000 in a farm, or even \$10,000, at least ten paragraphs, not exceeding ten lines each, every line of which is worth at least one dollar to him, and thus far we have reached but half our volume. The above instance of *prudence* (?) is from a professional person, every way cognizant of the fitness and appropriateness of things, and from invested and professional income, enjoys a revenue of \$25,000 a year. But on reflection, such a man can afford to do without our paper, *a poor man can't*.

WHEAT-SHEAF FARM.—It will be noticed in our advertising columns, that this well-known farm is now for sale. We had the pleasure, recently, of looking over it, accompanied by its highly intelligent proprietor. We intend to give a detailed description of it in our next, for the purpose of illustrating to our readers the practical application of some of the most valuable principles of agriculture, which have here been successfully applied. The facility for manuring the land and rendering it susceptible of the most profitable cultivation, from the unlimited resources of the farm itself, together with the convenient and scientific arrangement of the lots, buildings, &c., render it every way a most desirable investment for the well skilled agriculturist. If Mr. S. will convey, with the title, his mode of management, and the science he has brought to bear in its cultivation, for which his well-known benevolence is an ample guarantee, we might say of it, as *executor Johnson* (the learned and pompous Dr. Samuel,) said of his deceased friend Thrall's brewery:—"We offer you, gentlemen, for sale, not a few beer tubs and brewer's vats, and the buildings to shelter them; but the *potentiality of growing rich beyond the dreams of avarice.*" The Doctor's prediction was fully verified, for the purchaser realized a princely fortune from the investment.

CURE FOR WARTS IN HORSES AND CATTLE.—A valued friend of great experience in horses and cattle, and who has imported and bred many of the best in the U. States, says that a strong wash made of pearlash and water, applied thrice a day, will remove tumors and warts.

REMEDY FOR CORRODING THE FLESH BY FLIES AND MAGGOTS IN LIVING ANIMALS.—Another friend who has a valuable imported ram, on whose neck the flies have made some inroads, will be gratified to learn from the same source, that by mixing a strong decoction of elder bark with an equal quantity of spirits of turpentine, the flies will be kept off, and allow the skin to heal. A salve may be made by adding tar to the above. Paints made of white lead and linseed oil will greatly assist the healing of wounds in all animals.

NEW LAMP for burning lard.—A friend in this city says he has used a newly-constructed lamp, recently patented, in which lard is substituted for oil. The wicks are arranged as in the oil lamps, and are kept saturated with *liquid* lard, by a metallic rod, which is heated by the flame, and extends to the lard below. He represents the light as equal to that of oil, and without any sensible odor. The cost of his light he estimates at not exceeding *one third* that from oil at its present prices, reckoning the lard at 8 cents per lb. It needs little sagacity to foresee that this new article must soon usurp the place of oil entirely, and add immensely to the consumption of this important western product.

We are informed that lard is also extensively used by our woollen manufacturers, as a substitute for oil on wool, preparatory to carding and spinning. The revival of our woollen manufactories will thus furnish an immense consumption for two of our most valuable animal productions.

COPYRIGHT.—We have several times noticed our articles straying through exchange and other papers, without crediting the source from which they were derived. This is a small matter to be sure, but as we are but beginners among the editorial fraternity, we want whatever credit we are entitled to.

DYNAMOMETER.—A writer in the S. W. Farmer, recently made some inquiries respecting this instrument, which is used to test the amount of power required to draw a plow, thus indicating the relative facility of moving two or more plows, which perform their work equally well. This is a valuable test, and ought to be in the possession of every agricultural society. We have made

some inquiry for them in this city, but do not succeed in finding one. The Am. Institute procured one from Boston last season, which not proving entirely perfect, has been returned there for repair.

The Messrs. Brentnall, who advertise Berkshires in our paper, are the earliest importers of this valuable breed into the country. Ontario we saw while young, and he then gave promise of excellence, which, we understand, he has fully realized since.

The Messrs. Wait, who offer South Downs, have made several choice importations, not only of different breeds of sheep, but of other improved stock, which they personally selected in England.

GOOSEBERRIES.—Our spirited friend, Wm. J. Townsend, of Astoria, L. I., has just sent us in a *sprig*, eight inches long, which contains 14 perfect gooseberries, averaging 3 1-4 inches in circumference. They are a part of the growth from a small cutting set out last year, and transplanted this spring. He trains a single stalk about a foot high, which is then allowed to branch out like an apple tree, but he is careful to keep an open top, to admit plenty of sun and air. Around each plant he puts a *quarter of a pound of saltpetre*. If a practice is to be judged of by its fruits, we wish no better evidence of the utility of this.

The above three articles were in type for the July No. of our work, but were lost sight of by the printer till now.

SAXTON & PEIRCE, Boston, Mass., are Agents for this work.

ERRATA.—We correct some of the most prominent that have occurred.

No. 2, page 40—2d column, for "300 acres" read 500.
 " 3, " 76—2d do for foreign "imports," read *imposts*.
 " 3, " 78—2d do. for by its "roots," read *stalks*.
 " 3, " 81—2d do after "welcome" read *toy*.
 " 5, " 150—2d do. for "Philania," read *Philautia*.
 " 5, " 151—1st do. for "Sagnitia," read *Segnitia*.

Works pertaining to Agriculture for sale by Saxton & Miles, 205 Broadway.

Johnson's Elements of Agricultural Chemistry and Geology, 50 cents; Do. do. 1 vol. 12mo. \$1; Gray's Botanical Text Book, \$1 50; Lindley's Horticulture, \$1 25; Gray's Agricultural Chemistry, 75 cents; Downing's Landscape Gardening, \$3 50; do. Cottage Residences, \$2 50; Leibig's Organic Chemistry, &c. &c.

Orders from any part of the United States punctually attended to, at the cheap cash book store, 205 Broadway

Wheat Sheaf FARM on Staten Island, for sale.

A recent domestic bereavement has induced the Undersigned to offer his residence, on Staten Island, for sale. It is situated midway of the outer bay, on the sea shore, eight miles from the quarantine Ferry, three from that of Rossville, and equi-distant from two others, Seguin's Landing and Port Richmond.

The condition of the Farm—the extent, value, and practical usefulness of the improvements and its peculiar advantages, are sufficiently known. It has been improved in a way to render it susceptible of six farming divisions of thirty acres and upwards, each, including an appropriate allotment of woodland—each division offering a moderately elevated building location. The condition of the soil can at this time be best appreciated, as its harvest is heavy and now gathering. Terms to suit the purchaser, as the object is merely to change the investment for another susceptible of equal product.

W. A. SEELY, 218 Fulton-st. N. York.

REVIEW OF THE MARKET.

Prices Current in New-York, Aug. 24, 1842.

ASHES, Pots, per 100 lb.	\$ 5 50	to 5 62
Pearls, do.	5 87	.. 5 94
BEESWAX, Yellow, per lb.	28	.. 30
COTTON, Louisiana, do.	6	.. 10½
Upland, do.	5½	.. 9
Florida, do.	5	.. 9
Alabama, do.	6	.. 10½
FEATHERS, American, live, per lb.	24	.. 32
FLAX, American, per lb.	7 ½	.. 8
FLOUR, Northern and Western, via Erie Canal, per bbl.	5 00	.. 5 12½
do. via N. Orleans.	4 87	.. 5 00
Southern, per bbl.	5 25	.. 5 37
RYE, per bbl.	—	.. 3 62
MEAL, Corn, per bbl.	3 00	.. 3 06
do. per hhd.	13 25	.. 13 50
WHEAT, Western, per bushel.	1 03	.. 1 10
Southern, do.	80	.. 95
RYE, Northern, per bushel.	08	.. 61
CORN, do.	53	.. 60
Southern, do.	51	.. 56
BARLEY, per bushel.	60	.. 62
OATS, Northern, per bushel.	28	.. 31
Southern, do.	22	.. 23
PEAS, Green, do.	91	.. 1 12
BEANS, White, per bushel.	1 20	.. 1 40
CLOVER SEED, per lb.	7	.. 8
TIMOTHY SEED, per tierce of 7 bu.	15 00	.. 16 00
FLAX SEED, rough, do. do.	10 50	.. 11 00
clean, do. do.	12 00	.. 12 50
RICE, per 100 lb.	2 25	.. 2 87
HEMP, Russia, per ton.	215 00	.. 220 00
American, do.	—	.. —
HOPS, first sort, per lb.	11	.. 14
LEAD, Pig, per lb.	3½	.. 3½
Sheet and Bar, per lb.	4½	.. 5
OIL, Linseed, American, per gal.	82	.. 88
PLASTER OF PARIS, first quality, per ton, unground do.	2 25	.. 2 75
BEEF Mess, per bbl.	7 25	.. 8 00
Prime, do.	2 50	.. 3 00
Cargo, do.	2 50	.. 2 75
PORK, Mess, do.	7 50	.. 9 50
Prime, do.	5 00	.. 7 50
LARD, per lb.	6½	.. 7½
BUTTER, best Table, per lb.	16	.. 18
Western, good, per lb.	10	.. 11
Shipping, do.	6	.. 7
CHEESE, in boxes and casks, per lb.	5	.. 6½
HAMS, Smoked, per lb.	5	.. 7½
Pickled, do.	4	.. 4½
Shoulders, smoked.	3½	.. 4
BEEF, Smoked, do.	5½	.. 6½
SALT, Liverpool, ground, sack	1 20	.. 1 25
do. fine, do.	1 45	.. 1 55
SUGAR, New Orleans, per lb.	3½	.. 5½
TOBACCO, Virginia, do.	2	.. 6
Kentucky, do.	2½	.. 6
TALLOW, American, do.	6½	.. 8
WOOL, American Saxony fleece, per lb.	32	.. 35
Full blood Merino do. do.	28	.. 30
Half to three-fourths do. do.	24	.. 26
Native to half do. do.	18	.. 20
SHEEP PELTS, each.	20	.. 50
HAY, new, per 100lb.	50	.. 62
old do.	62	.. 75
POTATOES, new, per bushel.	22	.. 23
EGGS, per 100.	1 12	.. 1 15

REMARKS.—Aug. 24.—The demand for FLOUR and GRAIN from abroad has fallen off, and as the new crop is coming in freely, prices have rapidly receded since our last. A much larger reduction is confidently anticipated. The grain prospects in England and throughout Europe are generally very promising, and there is little expectation of any considerable demand from that quarter; while our own crops have been so unusually good and abundant, and so large a portion of our population are producing their own food, that it is believed grain will reach a lower price in the American market than has been known for a great many years. Corn and oats are abundant and dull.

PROVISIONS, PORK, BEEF and LARD, are without much change. It continues to be shipped in small quantities. Exports from 1st to 17th Aug. 713 bbls. Beef, 3,136 bbls. Pork, and 2,920 kegs Lard.

CATTLE MARKET.—At market, 1,000 fresh Cattle; 35 Cows and Calves, and 2209 Sheep.

BEEVES.—Beef Cattle very dull, and prices barely sustained. We give the extremes as \$4 a \$6 per 100 lbs for fair. 462 of the cattle came from Pennsylvania, and the residue from the north and east. 550 remained unsold, and 70 were sent to Brighton. Cows and Calves.—All at market but 12 sold at from \$20 to \$38 each.

SHEEP and LAMBS.—Prices of Sheep ranged from \$1.50 to \$4; Lambs, \$1.25 to \$2.75 each, according to quality.

✂ In consequence of the removal of the former publisher of this paper to England, it will hereafter be published by Messrs. SAXTON and MILES, booksellers and publishers generally, at No. 205 Broadway. All letters on business relating to the Am. Agriculturist, should be addressed, *post-paid*, to them.

SAXTON & MILES,
PUBLISHERS AND BOOKSELLERS,
205 BROADWAY—NEW YORK.

Wholesale and Retail Dealers in Standard, Theological, Classical, Agricultural, Health, Miscellaneous and School Books.

S. & M. intend keeping a full supply of all works relating to Agriculture and its improvement, and to the sciences connected therewith; and to make their store a Depot, where the FARMER ESPECIALLY can find any thing he may wish, whether pertaining to his business or otherwise; and also where he can send his orders for books, with the confidence that they will be promptly and faithfully attended to.

C. M. SAXTON,
E. F. MILES.

THE HEALTH ALMANAC FOR THE YEAR 1843.—

Devoted to the Law which regulates the animal, originally designed for the Spirit of Man—By a VEGETABLE EATER.

CONTENTS.—Equinoxes and Solstices. Eclipses in the Year 1843—Calendar, with Maxims on Health, Law, Policy and Mind—Agricultural Statistics of the U. S. by Hon. H. L. Elsworth—Mastication—Life—Milk—Nothing made in vain—The Stomach and Internal Canal—Worms in Living Creatures—On Swine's Flesh as food—Original Food of Man—Relation of Man and Wife—Relation of Parent and Child—Preparation of Bread Stuff—Bread Making—Head Ache—Life and Death—Formation of the Teeth—Bankrupts—Eating—Query answered—Disease and Pain—Bathing—Sleep—Dreaming—General Differences of the Sexes of the Animal and Vegetable Kingdom—Rates of Postage, &c.

Published by SAXTON & MILES, 205 Broadway—price 6 cents single copy; 37 1 2 cents per doz; \$2 50 per 100; 20 dols. per 1000

Important Sale to Agriculturists.

IMPROVED SHORT HORN DURHAM CATTLE.

On Thursday, the 8th September,

At 10 o'clock, will be sold at public sale, at the Exhibition ground of the Philadelphia Agricultural Society, Rising Sun, on the Germantown Road, 3 miles from the city, a choice selection of splendid DURHAM DAIRY STOCK, from the herd of James Gowen, Esq., of Mount Airy, consisting of imported Cows, young Bulls and Calves, from Dairy Maid, Pochontas, Victoria, etc., and by the celebrated bulls Colostra, Prince of Wales, and Leander.

This sale will afford to breeders an opportunity of adding to their stocks thorough bred animals of high character and pure blood, and their diffusion into proper hands is a primary object in this sale, together with the necessity of a separation of the herd to prevent over close breeding.

Catalogues will be ready in due time, and the cattle may be examined at the Exhibition ground two days previous to the sale.

Contents of this Number.—Editorial.

History and Traditions of Short Horn Cattle,	161
Farm of Mr. Bates—Clay Lands,	165
Improvement of Sandy Soils,	166
Reclaiming Peat Swamps,	169
Wheat, Oats, Improvements on Farms, Saxon Shooep and Mountain Pastures,	170
D. C. Colling's S. H. Cattle and Rambouillet Sheep—Handling Stock,	171
Cultivation of the Mulberry,	179
Preservation of Grapes and Must,	174
Sheep on the Prairies,	176
Soiling Cattle—Effect of Humidity on Temperature,	177
Original Correspondence.	
Paular Merinos—Domestic Poultry,	178—179
Uses of Charcoal as Manure,	180
Native Swine—Weevil Influence of the Moon,	181
Preservation of Health—Illinois Harvests,	182—183
Southern Crops—Howitt's Rural Life—Receipts, Selections.	184
Raising Corn for Sugar—Cheap Roof,	185—186
Bees Compost—Boiling Cotton Seed—New kind of Heap—Cure for Grubs in Horses,	187
Cut of Woburn Boat—New Publications,	188
Editor's Table.	
Directory for Fairs—Ourselves,	190
Cure for Injuries to Cattle—Lard Lamp—Dynamometer—Errata, &c.	191